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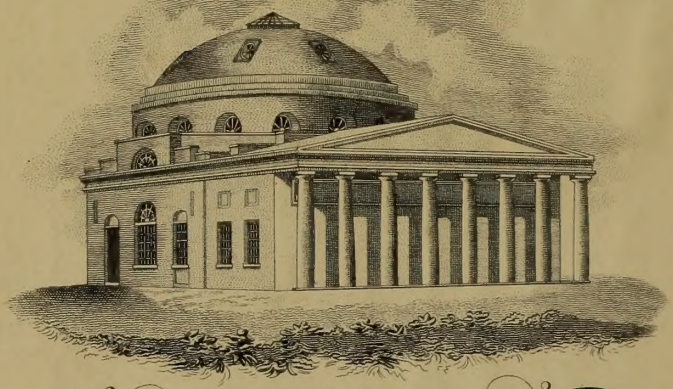

University of Maryland

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University of Maryland Theses

Early Doctor of Medicine and Doctor of Physic Dissertations with Corrected Tables of Contents

These manuscripts described as either an Inaugural Dissertation or an Inaugural Essay were presented to the University of Maryland for the Degree of Doctor of Medicine and/or Doctor of Physic during the years 1813-1887. The individual dissertations were bound together during the 1940's. The original tables of contents for the bound volumes contained multiple errors in authors' names, titles, and/or years. To address these errors, an additional "Corrected Table of Contents" has been inserted at the beginning of each volume.

The project team who investigated and corrected the tables of contents were Richard J. Behles, Historical Librarian/Preservation Officer; María Milagros Pinkas, Metadata Management Librarian; Angela Cochrane and Carol Harling-Henry, Resources Division; Sarah Hovde, Abra Schnur and Megan Wolff, Services Division.

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THESES

1830

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An Inaugural dissertation on Asthma, submitted to the Medical faculty, of the University of Maryland for examination, by

Thos. J. L. Nottingham of Virginia. March 15th 1830

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Inaugural Dissertation

In entering upon the practice of Medicine nothing could be more useful to the young practitioner than a correct system of Nosology; yet it is what the young practical physician has never had to guide him correctly when caled to administer for the ravaging diseases which destroy so many of the human family. It appears upon a superficial view that nothing could be more easy than for a practical physician to describe the different symptoms attending different diseases, and in fact this is in some degree probable, but that he can describe every symptom which may attend a disease under whatever circumstances it may present itself is what I think impossible. We may by strictly attending to the rules which Nosologists have laid down be enabled to detect certain symptoms which are regular attendants on certain diseases

and those symptoms may be sufficient to point out to us the true character of the disease, yet we sometimes find the disease accompanied by symptoms which no nosologist has ever yet described. We are well aware that the nosologist can point out those diagnostic symptoms which will always and under all circumstances enable him to distinguish Canine Madness from syphilis; and also know that they cannot be changed from one to the other, but we cannot agree that the nosologist can distinguish inflamation of the pleura from that of the lungs themselves, with as much precision as can the Chemist distinguish gold from sulphur.

Every one who is conversant with the important science of Medicine must readily admit that it is far from perfection in consequence of the many causes

which are daily generated to produce new diseases
These are circumstances which will render abortive
any attempts to form a perfect diagnostic system of
nosology. Although we cannot look forward for a per-
fect system, yet we are not insensible of the merit
of those ingenious though we must say imperfect
ones which have been presented to us at different
times and by different authors among whom are to
be found some of the most distinguished cultivators
of the medical science and we are happy to say ~~the~~
that they have not laboured altogether in vain.
We have said that new causes are daily generated to
produce new diseases, and we might say different
types of the same disease, but in saying this we do not
wish to be understood to say that those regularly orga-
nized diseases which invariably present themselves

upon the application of certain poisons, are altered in their essential characters, but are only modified in consequence of the different circumstances under which they appear. That some unknown causes produce new diseases is obvious from the fact that but a few years ago Scalatina was not known in this country, and we may say in any other country.

From one of those assidious cultivators of medical science I will take the character of the disease of which I propose to treat.

Asthma, the subject of the following essay has been confounded with many other diseases which are totally different in their causes as well as their essential characters. Every difficulty of breathing or shortness of breath from whatever cause has been denominated asthma by the ancients.

The difficulty of breathing which takes place in Pneumonia, Phthisis, Anurism of the Aorta Hydrops pericardia, and even in some nervous diseases as hysteria &c. have been styled with the appellation of Asthma and here as well as many other cases we have cause to regret that authors who should have known better have been so fond of lengthening out the catalogue of diseases as to enumerate merely the symptoms of diseases for diseases themselves.

Asthma has been considered by the illustrious Cullen as well as by many other authors as a spasmodic disease and we readily agree with him in considering it thus in some cases but cannot agree to follow him through his whole rout of spasmodic symptoms. We think that the symptoms of Asthma

may be accounted for without the superfluous interposition of spasm and we have not much doubt but that Dr. Cullen might have accounted for them differently had he not been so strongly prepossessed in favour of his spasmodic doctrine. Whenever we find Dr. Cullen entangled in the labyrinth of perplexities we are sure to hear him calling out for the aid of spasm to extricate himself. We can very readily conceive how the spasmodic affection of the diaphragm, intercostals and other muscels of respiration may diminish the capacity of the chest and thus produce the difficulty of breathing. We can also conceive how the debility of the vessels of the lungs and the consequent accumulation of blood in them may also produce asthma, but we

cannot believe that asthma can be produced by a spasmodic affection of the bronchia or trachia Every attempt of anaomists to find muscular fibres of sufficient power in the bronchia or trachia to produce asthma has we conceive totally failed. We must then say with Dr. Potter that asthma is constituted by a congestive state of the lungs and we perceive that Dr. Cullen was not altogether ignorant of that cause when he says that asthmatic fits seem to depend upon some fulness of the vessels of the lungs; it is probable that an obstruction of perspiration and the blood being less determined to the surface of the body may favour an accumulation of blood in the lungs and thereby be a means of exciting asthma.

Symptoms.

From the definition which we have already given of the disease it is understood that a difficulty of breathing occuring at intervals with a sense of narrowness in the breast are the most usual symptoms. Generally on the evening preceding an actact of asthma the spirits are much affected and the person experiences a sense of fulness about the stomach with great lassitude and drowsiness; with a feeling of straitness in the lungs impeding respiration. The difficulty of breathing continuing to increase for some time respiration is performed with difficulty the speech becomes difficult and uneasy a propensity to coughing succeeds and the patient can no longer remaining horizontal possition being as it were theatened with immediate suffocation.

Towards the approach of morning a remission of these symptoms generally takes place to the great relieve and satisfaction of the suffrer. I have just said that the paroxism very often comes on in the night which may be accounted for by considering that the body is in a recumbent position as well as the defence-less state in which the system is during sleep.
The face during the first paroxism is generally turnid and the eyes are protruded but in the more advanced stage of the disease the face pale and emaciated. A paroxism is excited by exercise, by ascending a flight of stairs, by facing the wind, by anger, and sometimes by joy, in consequence of which the patient generally seems disposed to quaness and avoidance of exercise or any things which may hurry the circulation of blood through the lungs. When the disease has continued for some length of time the vital as well as the natural functions

are impaired in consequence of the blood not being decarbonized by the lungs hence Dyspepsia and all its consequences. This disease according to Dr. Cullen though often threatening immediate death very seldom produces it, and persons often attain to old age in this disease.

When it does prove fatal it is by a congestion of blood in the lungs which compresses the air-cells and thus cutting off the communication between the lungs and atmosphere causes suffocation. It has been said that this disease sometimes produces Phthisis Pulmonalis, but this perhaps is never the case unless the patient be scrofulous. It sometimes produces Hydrothorax by debilitating the vessels of the thorax and causing an accumulation of blood and effusion of serum.

Asthma has been divided into many species as the

moist, the dry, the spasmodic, and many others; but we choose to comprehend it under one species only viz. the plethoric.

Diagnostics.

Asthma as we have already said has been confounded with many other diseases as well as symtoms of diseases, as Dyspnea, aneurism of the aorta, Angina Pectoris, Pneumonia, Hydrothorax &c. It is unnecessary to point out the difference between Asthma and Dyspnea, as the latter is only a symptom of the former disease, as well as of many other diseases.

Asthma may be distinguished from Aneurism by the gradual approach and constant presence (while Asthma recurs at intervals.) (there is frequent constant ~~—~~ uneasiness in aneurism) of the symptoms of Aneurism, while in Asthma there is a peculiar strainess of the thorax and when the aneurism has enlarged considerably the

pulsation of a tumor in the situation (may be felt) occupies which no longer leaves a doubt as to the character of the disease.

From Angina Pectoris, by a numbness down the arms which is an attendant on Angina which is not on Asthma. By the symptoms of Angina suddenly going off while those of Asthma go off gradually.

From Pneumonia 1st. By pyrexia being an attendant on Pneumonia, which does not attend Asthma. 2nd. By the patient being more easy in a recumbent posture in Pneumonia and by being more easy on one side than the other, which is not the case in Asthma, 3rd. By the pain being on one side generally in Pneumonia while it is deep seated and not well defined in Asthma.

From Hydrothorax. By a dropsical diathesis and

oedematous swelling of the feet and legs which generally attends the latter disease with a scarcity of urine. In the advanced stage of Hydrothorax a fluctuation of water may be perceived which removes all doubt on the subject.

Causes of Plethoric Asthma

We will divide the Causes into predisposing and exciting causes, and first of The Predisposing Causes. Which are debility of the lungs by whatsoever Cause produced, by congestion of blood or of serous humours in the lungs, noxious vapours, impure and smoky air, cold and foggy atmosphere, the reception of dust into the lungs, sudden changes of temperature, by scrofulous or gouty acrimony, or by repeated attacks of Catarrh, or many other Causes which tend to weaken the lungs.

Exciting Causes.

The exciting causes are such as accelerate the circulation of blood through the lungs as violent exercise, great emotions of the mind, any thing that is calculated to excite the passions, by ascending a flight of stairs, by a sudden change from a dense to a rarer atmosphere, by ascending mountains, or by burning coal or any other combustible substance in the room, by a repulsion of any eruption from the surface of the body which causes a determination of blood to the viscera and consequently to the lungs. by a suppression of any long continued evacuation as the menses &c. Asthmatics generally enjoy better health in Cities than in Countries, in valleys than on mountains.

Prognosis

Our prognosis will be formed according to the urgency of symptoms. If the patient be seized suddenly and the attacks continued a great length of time with considerable severity and if those attacks will not submit to medical aid or from peculiar circumstances medical aid cannot be obtained, the prognosis is unfavourable, but if the attacks are neither frequent nor severe the constitution not impaired, and the patient is young, and medical assistance is promptly obtained, this disease seldom proves fatal.

Method of Cure.

It now remains for us to point out the most approved method of cure, which is allowed to be a matter of the greatest importance. If the plan of treatment I lay down may be considered proper I shall feel much pleased, not that there is any originality in it, but that I have been fortunate enough to select from the many proposed plans

the most appropiate one — one which if it will not cure the disease always will if properly managed always prove paliative. From the pathological view which we have taken of this disease, the remedies very naturaly present themselves; and first, in rank is bloodleting, the modus operandi of which is obvious to every one; by taking off that blood under which the vessels of the lungs are labouring, and by equalizing the circulation. We are well aware that many authors are opposed to bloodleting in this disease, but knowing that the success of practitioners in this disease must depend almost exclusively upon the lancet, we do not hesitate to recommend it; in fact this is the most prompt and only certain remedy in a severe fit of Asthma. Somtiems from a long continuance of this disease the vessels of the lungs become so much debilitated that they are no longer able to contract and empty themselves, after venesection and the bis a tergo taken off then blisters act very beneficially by strengthening the weakened vessels. From the conclusions we have already drawn viz. that

the symptoms of Asthma are dependant on a want of sufficient expansion of the lungs and free circulation through them, emetics appear also to be useful, by causing those long inspirations which are consequent upon the violent exercise made in vomiting, as well as the general relaxation and evacuation they produce. It has been remarked that when a patient labouring under Asthma is attacked with diarrha that the symptoms of Asthma have immediately disappeared. From the above fact we are induced to suppose by keeping up an artificial diarrha that Asthma might be cured. Cannot we use bloodletting and purgatives to act in the same way by reducing the body? Diet should be used abstemiously and such articles should be used as are easy digestion. Flanel should always be worn next the skin which keeps up a determination to the surface and thereby diminishes the flow of blood through the lungs. The patient should take moderate exercise between the paroxisms but not sufficient to produce fatigue. Sailing is thought to be the most salutary exercise that can be taken, and a voyage to sea has been known to cure it when every other remedy failed. Riding on horse back should be practiced if possible; if not riding in Carriage should be substituted

All modes of gestation are beneficial even swimming is attended with good effects. Change of climate is perhaps superior to any thing that can be done towards the cure of this disease. Hard labour should be practiced which might ~~be~~ increase the vigour of the body sufficiently to over come the predisposition. The bowels should be kept open to prevent the irritation of accumulated feces. In the paroxism our remedies should be prompt and energetic. As death is evidently produced by suffocation the compression should be taken off, and for this purpose bloodletting is superior to any other remedy. Authors have ordered a blister to be applied over the region affected, but as in all probability they act through the medium of the nervous system, would it not be better to apply them to the inner side of the thighs or arms as they are more sensible? When Asthma is attended with great difficulty of breathing digitalis combined with opium has had the most happy effects.

When attended with a troublesome dry cough Ipicahuanha in small quantity combined with the above articles, adds much to their efficacy. Other remedies such as musk opium camphor and others of the same class have been used with good effect

An Essay on Dyspepsia
presented to the Provost, Trustees, and Medical
faculty of the University of Maryland, for
examination by Edwin Sernard, Virginia
a candidate for graduation, March 28th 1838.

Dyspepsia.

By dyspepsia in its most precise sense, may be understood that state of the stomach, in which its functions are disturbed, all the secretions are vitiated, the gastric juice may be either deficient, or secreted in too large quantity, or vitiated in quality. usually the coats of the stomach become involved with a thick tenacious mucus. there is also a morbid condition of the nerves of the stomach, or from general torpor, or defect of the whole nervous system. The primary symptoms of dyspepsia, are a sense of oppression after eating, nausea and sometimes vomiting, sour eructations furred tongue fœtid breath, uneasy sensations about the epigastrium, vitiated appetite, constipation &c. The pulse is small and corded, and the depression of spirits, and in some cases amount to Hypochondriasis there are also certain anomalous affections as acute pain in the chest and head deprivation of vision vertigo and palpitation of the heart the scalp in some cases becomes exceedingly tender amounting almost to the doulourey, hysteria tetanus &c are also symptomatic of dyspepsia, the evacuations from the bowels vary much in their appearance sometimes they have a clayey appearance at others a bilious hue, not being

arrested the case after a while assume a new aspect the vascular system becomes involved and we have the symtomes of febrile excitement, the causes of dyspepsia may be divided into those which act immediately on the stomach, and those which affect that organ through the medium of nervous system, of the first kind are excess in eating or drinking or improper food an undue limitation of diet the excessive use of tobacco tea coffee acid spirits, and too frequent use of medicine such as Emetics: are very apt to bring on the disease, Indolent and sedentary habits intense study close application to business within doors grief, disappointed ambition, excessive venery exposure to cold suppressed perspiration, and cold feet, Dyspepsia is not always idiopathic it is sometimes symtomatic of the disease of the Liver Spleen Pancreas or the Brain, On dissection the stomach is generally found flabby and relaxed with some alterations in structure and enlargement of the mucus folicles. In other cases we find evidences of chronic inflamation, Nosologists have uniformly considered this disease as consisting in debility of the mucus coat of the stomach, of deficient secretion, In its commencement the disease is purely nervous ;

the continuing inflamation with its ordinary conse=
=quence follows. In the first instance there is functional
disorder, the digestion is very imperfect attended with
flatulency sour eructations &c the muscular power
is also impaired by the same cause and the
food is in consequence not driven into the bowels
~~to~~ leave the load which oppresses. In the second
stage of the disease inflamation frequently super=
=venes. and then follows tenderness of the Epigastrum
hard corded pulse, warm skin, and burning
of the palms of the hands the first indication
in the treatment of the disease is to pay strict at=
=tention to diet, we consider it the most important
part of the treatment, next to gentle Cathartics which
evacuate without creating irritation, a Rhubarb with
Calcined magnesia or tincture of Rhubarb, before resorting
to tonics we should carefully ascertain the infla=
=mation does not exist. dyspepsia is to often regarded
as mere debility of the stomach if however the symtoms
of inflamation do not exist it may be proper to
resort to tonics for the purpose of restoring tone
In the progress of the disease particular affections
arise which if neglected react on the disease

however we palliate these symtoms we should keep the permanent cure constantly before us the first of these which should be noticed is Cardialgia which is a very painful affection arising from acidity, to correct this lime water and milk diet, Magnesia or any of the alkalies may be used sometimes the stomach is thrown into spasm called gastrodinia when that is the case opium should be used. A glass of milk will sometimes relieve when opium fails, Pyrosis or water brash is another symtom of dyspepsia it is produced by too free use of salted meats it also arises from excess in eating or drinking or from ~~excess~~ the habit of distending the stomach with large draughts of cold water, the sick headach which is also symtomatic of dyspepsia, If all other means fail in the treatment of dyspepsia Mercury is next to be resorted to it may be given in small doses combined with Ipecacuana three grains of blue mass may be combined with one grain of ipecac and this should be given at night and purged of in the morning with a little Magnesia this course should be continued until the system is impressed by ~~mercurial~~ action,-

Mr. Wilson Philip has recently used Galvinism with advantage from the following view of the Pathology of dyspepsia, he believes the disease to consist in diminished nervous influence having seen that digestion was suspended by tying or cutting the nerve which supplies the stomach, believing also that the nervous and Galvanic fluids are essentially the same he has recommended Galvanism to supply the nervous deficiency which exists. what has been said above relates to the simple form of dyspepsia. It is always prone to change the primary form of irritation for that of inflamation the latter is known by a strange sensation of heat and pain hard corded and quick pulse a diminutive fever of the hectic kind hard dry cough tenderness of the hypochondrium and Epigastrium, it may be readily mistaken for Pulmonary Consumption and may induce that disease symptoms of Pulmonary disease frequently result from irritation in the stomach and bowels arising from other causes such as worms and it is by acting on the duodenum liver. In these cases small and repeated bleedings are necessary as in all other inflamatory disease of a chronic form local bleeding and blistering should

resorted to small doses of ipecac are now of great value it appears to act as an alterative imperceptibly changeing the condition of the stomach to its natural action, the bowels are to be attended to, the neutral salts although by no means suited to simple cases of dyspepsia unattended by inflamation are here the proper remedies, Having by these means reduced the activity of the symtoms mercury must next be resorted to so as to obtain alterative effects or if there be much vascular obstruction salivation should be brought on during the inflamatory stage the diet should be as low as possible. When dyspepsia has arisen from intemperence accompanied by vomiting and spasm opium volatil alkalis are to be used and to affect a permanent cure the patient must undergo a compleat reformation in his habits. Little if any benefit will be derived from medicine. Strict regimen of diet is very necessary in the cure of dyspepsia, the first rule to be observed is to permit your patient to dine from only one dish and a small quantity of that at a time but frequently repeated so as to keep the stomach constantly employed. Persons liable to this disease

should dress warmly in winter flannel next to the skin is very important. Exercise on foot or on horse back should be recommended the best exercise is walk=
=ing it give tone to the stomach, dyspeptic patients should sleep upon a hard mattrass one made of hair or shucks they should also retire early to bed and get up early in the morning, I think it advisible to lay aside tea and Coffee altogether and place the patient on a milk diet in some cases the becomes sour and some stomachs at the commence=
=ment of the diet in such cases it is better to add lime water with the milk, all acid drinks are injurious spirituous drinks should also be prohibited, If any stimulating drink should be necessary a glass of old madeira wine some persons can take Ale Porter, the bread should be baked very hard and kept a day or two before used, the unfermented bread ~~stand~~ such as ship bread crackers which are made up with nothing but water and baked very hard is the best bread which can be used, bread should be a day or two old before used, bread which is made up of lard or butter is very injurious to dyspeptic patients ginger bread made up with a warm arro

is proper food for a patient in this disease, Rice simply boiled with a little nutmeg is very easily digested. Roasted beef done rare may be considered the best animal food together with mutton & venison these articles should be used without any condiments except a little salt, If the patient have been accustomed to salted provisions you may allow him bacon no young animal food cannot be used, Wild fowls are much more digestable than tame.—

An

Inaugural Essay

On

Rheumatism

for the degree of Doctor of Medicine

Respectfully submitted to the consideration

of the

Trustees and Faculty

of the

University of Maryland

By Henry Schultz

of Baltimore

March 15th 1830

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An Essay
On Rheumatism

The characteristic symptoms of Rheumatism as put down by most medical writers are, Pyrexia, pain about the larger joints, and extending some distance up those muscles, which are inserted into them; it is divided into acute and chronic.

The Acute

Comes on by lassitude and chills, with a numbness ~~with~~ of the joint, which is followed by great heat, thirst, pain in the head, with acute pain in the joint, very tender to the touch, and a high degree of inflammatory fever

The Chronic

Is rather a consequence of the acute, when it occurs it is owing to the patients having had the disease in the acute form, and not having been properly treated, it is attended with local inflammation and no general fever,

This disease occurs most commonly in the spring and

Fall, owing to the frequent change of weather in those sea sons, and for the same reason it is more prevalent now then formerly, a person will be more liable to it ~~H~~ who may have become weakened by some other disease, but any person may be attached with disease, who has exerted himself to a great degree, and suddenly goes into a damp atmosphere, and thereby checking the perspiration.

It has sometimes been mistaken for Gout, but it may easi ly be known from Gout, for Gout attacks the smaller joints and Rheumatism the larger, in Gout there is a whitish substance resembling Chalk ~~in~~ ~~H~~ deposited on the joint, in Rheumatism there is not, Gout is brought on by intemperance in eating or drinking Rheumatism is brought on by exposure to dampness. Gout is Hereditary Rheumatism is not, we will therefore seldom mistake by learning a history of the case.

Rheumatism mostly attacks persons between the age of fifteen and fourty years, it seldom attacks old people for the first

time, it occurs most frequently in sea ports, but I do not suppose there is any place, where there is much change of weather, that we will not find the disease, in this country it occurs most frequently in the middle States, it seldom proves fatal except in scrofulous persons, Dr Potter says he saw two cases in which it suppurated, it may produce paralysis of a part, by the tendons becoming thickened and pressing on a nerve, it is sometimes mistaken for Pleurisis, but in such cases it may be known by the symptoms, in pleurisis the pain is stationary, whilst in Rheumatism it changes to some other part &c

Causes

Obstructed perspiration caused by great exertion, and going into damp atmosphere, laying on damp ground between damp sheets, or the body being exposed to a current of damp air riding out in an open carriage during damp weather, especially when the body is in any way dibilitated, may all produce the disease

~~time~~ Symptoms

The patient for some time previous feels drowsy, and has chills he also feels acute pain in some one or more of the joints, which sometimes remain stationary but most generally moving about the body sometimes moving to different parts of the joint, the pain is much increased on pressure, the least motion is also painful to the patient, he generally has a head ache, white tongue ~~[illegible]~~ full hard frequent pulse attended with a very high inflammatory fever pain in the joint, much increased after the patient has become warm, in bed, which he tries to relieve it by turning from one side to the other, this will slightly relieve him but when the bed becomes completely warmed, it will no longer do so, he has considerable ~~loss of~~ thirst, loss of apetite, disturbed sleep the least noise awakening him, the joint becomes

red and there is effusion of Lymph, which makes the joint appear very large

Treatment

Bleeding I think one of the best remedies we can use in this disease, and if carried to a proper extent will in a short time reduce the inflammation, early bleeding and purging I think would in many instances cure the disease exclusive of any other remedy, most Phisicians stop short too soon they bleed once or twice and then leave that, and take up a new plan of treatment, I think the pulse should be completely reduced, before any thing stimulating is introduced, I think tis owing to this that we have so many cases of chronic Rheumatism, and sometimes even Paralysis. Bleeding both general and local, combined with a low diet, is necessary, avoiding all stimulating

drinks, Leeches is preference to cuping, but if leeches can not be obtained we may use cuping, if there is much effusion Friction is very good to excite the absorbents. Diaphoretics are good after the inflammation has been some what reduced, Mercury is of no benefit in the disease except as a purgative but I would prefer almost any other, for it has a tendency to keep up the action of the heart. Dr Potter recommends Colchicum in the second stage, he sais the only objection to it is, that it impairs the tone of the stomach, it might not be combined with something that could obviate that, and still not impair its influence over the disease, the cold bath may be of service in the inflamatory stage. the bowels should be kept open by purgatives the neutral salts I think are to be prefered for this purpose, the warm bath may be imployed after the inflammation has been some what reduced.

The Sciatica is the most difficult to cure, Dr Potter recommends bleeding in this until we relieve pain, he sais if this will not benefit we may use calomel combined with opium which he sais will mostly prove successful, Mustard cataplasms have been used in chronic Rheumatism, as also the tinc Cantharides, to relieve pain, Guiacum may be given internaly, it sweats and does not increase action, in chronic cases it is not sufficiently powerful, and we have to combine it with ammonia Stramonium is very good, the leaves boiled and applied to the part, as warm as the patient can bear it. The inner bark of the common Holly in decoction is useful. ℥j to 1 gallon of water, boil ten or fifteen minutes, dose from two table spoonsfull, to a teacupful, this is very good, The arsenical solution has also been

used with some advantage, it may be used in
eny stage, it acts on the skin. Dr Cotter sais bal=
sam of Sulpher has cured the disease where
every thing else has failed, dose a tea spoonful,
increased to a Table spoonful, three times a
day, a change of climate to a uniform climate
may be of considerable advantage.
Counter irritation kept up near the part affected,
when there is a thickening of a tendon, I have
known to cure a patient who had been afflicted
for eighteen Months the disease was situ=
=ated in the heel, the patient reduced the swelling
by constant and tight Bandaging, until he
could wear a boot which he had made large at
the heel which acting on the part, immediately
sufficient Sowall however to rub the heel
in the neighbourhood of that
affected completely reduced the swelling, so

that he can walk now without any inconveniance this patient at one time dispaired of ever getting well. Blistering I would not suppose was of much benefit, where the part was much exposed as on the Knee I had a patient who had the disease in both of his Knees after bleeding and the antiphlogistic treatment generally the one was blistered, and to the other I used camphorated whisky as a local application, the one with the blister was much longer getting well then the other, and the least change of weather would affect him, in the Knee which was blistered. I would suppose that if we could bring something to act on a joint, in the manner in which a tight boot does, to a heal it would be of considerable benefit—

An

Inaugural and Experimental Inquiry

As to the formation and growth of

Stone in the bladder,

and the operation of Lythotomy with the Scalpel

For the degree of

Doctor of Medicine

Submitted to the Examination of the

Roger B. Taney esq, Provost

The Trustees and Medical faculty of the Univer

University of Maryland

by Richard Parran

Hagers Town

Washington County

Maryland

1st day of April 1830

In accordance with the rules of the University of Maryland, It devolves upon me being a Candidate for the Honourable degree of D.M., to present my Views on some subject, connected with the science of Medicine or Surgery.

I have selected for the subject the formation of the stone in the bladder: and the best method, of extracting it after its formation. Lythotomy or the operation of extracting the stone from the bladder, was practised by the Ancients, and owing to the dangers attendant on the operation, many experiments have been made, with the object, of discovering a solvent for the stone: but hitherto all the experiments to accomplish that desireable object have completely failed, and we are compelled to resort to the operation of Lythotomy once the stone is formed in the bladder. It is true some cases have been reported where the calculi have been discharged, after the use of certain medicinal articles termed

Lithontripties, or solvents for the Stone; but I am of the impression that the breaking up of the Stone, could not with propriety be attributed to the remedies made use of but it was merely a casual occurance, which would have taken place had the medicine not been administered; as we know of many cases where the Calculi has been discharged and passed off without the aid of any Medicine

That Medicines may be administered which may prevent the predisposition to deposit Stone, I am willing to admit, and I believe that such articles as will correct the disordered state of the digestive organs, are most effectual. As I am inclined to believe that the Stone is deposited when there are derangements in the Chylopoetic viscera; I have come to this conclusion from many experiments, on the urine of different individuals in a state of health; and when indisposed, It was observed on placing the urine of a person in good health, in a large glass jar; and letting it remain for several days without being disturbed, and then pouring it off

that no deposit had taken place. The urine of the same individual when somewhat indisposed, was collected and placed in the same vessel; and on remaining two or three days, a considerable deposit of calculus matter took place and had coated the sides of the glass vessel, and when removed presented crystals of metalic lustre. When the indisposition remained several days and the urine was all collected a very considerable quantity of stone was deposited. It may be necessary for me here to mention the symtoms under which the patient laboured at the time the urine was collected, uneasiness of the head — thirst — craving apetite — dry skin — and in fact all the symtoms of dispepsia or indegestion: A light purgative and strict attention to diet would remove those unpleasent symtoms, and immediately on this being removed, and the patient feeling well the calculi would cease to be deposited.

Another fact perhaps worthy of record is, that if either of the individuals, the urine of which was

subjected to the experiments to which I have alluded, should indulge in the use of ardent spirits or wine that immediately on the use of those articles a deposit would take place from the urine.

From facts thus thrown together I am induced to believe, that in a healthy state of the system, the urine contains no redundant portion of calculus matter, but immediately, that the animal machine becomes thrown into a state of derangment, by the food not becoming properly digested and excess of calculus matter will exist; and if a nucleus should happen to be present in the bladder at the time of such derangment, a stone will be the consequence; as the redundant portion of stony matter contained in the urine will form around the nucleus.

In many cases of stone in the bladder, we find that the patients have laboured under symptoms of the desease perhaps for twenty or thirty years: and many of the calculi when they are extracted, after

remaining in the bladder after that great length of time will be found to be of small size—others again, will be of a very large size, altho the patients may have complained but a few years. I have noticed that in young persons of good constitution that the stone will accumulate but slowly, On the contrary in old persons with feeble constitutions, where the digestive organs are frequently deranged, a rapid increase in the size of the stone will take place.

These circumstances would again go to strengthen the opinions which I have adopted in relation to the formation of the stone; And to prevent this deposit diet and mild cathartic medicine, I have seen most effectual. I have with much attention read many cases on this subject, And great object of the writers appears to be the introduction of such articles into the stomach, as will combine with certain acids, which they believe to be redundant in the fluids. And they have recommended magnesia &c to

combine with the excess of acid, which they believe, to be present, thereby to correct the ~~dis~~ disposition to form Stone. I will admit that magnesia, will correct this state of the system, by acting as an aperient and correcting the disordered state of the digestive organs, & so will rhubarb and many other articles to tedious here to mention. The predisposition to the deposit, of Stone may be removed by diet alone —

My much respected friend Dr. John H. Anderson at this time Phisician to the Colony of Liberia, was in the habit of relieving himself by abstemous, diet. He could tell by his feelings when a deposit, would take place from his urine; and immediately he would pay particular attention to his diet, until he might be relieved. He was also in the habit of collecting his urine for the purpose of experiment; and invariably found a deposit to take place, when he was labouring under symptoms of Dyspepsia.

I have also noticed that in all the cases reported where there has been a calculus deposit in any other part of the body - as scrotum &c that great derangement existed in the functions of digestion: Upon the whole I am convinced that it would be far better for our patients were we to attend particularly to the general derangement of the system, which produces the excess of Lithic acid, and Uric acid, thereby removing the cause which produced the excess, than to introduce into the stomach — Muriatic acid — Magnesia — Soda &c for the purpose of neutralizing after they exist. I say relieve the stomach and bowels, this being done, there will be no excess of Lithic acid: the Skin will perform its proper function and the Kidnies will take care of themselves

In support of the theory which I advance, I now report a case which came under the care of Drs

Mr. D. Macgill of Hagers Town, and I am of the impression that it will go to prove, that it is only necessary that a nucleus should find its way into the bladder, once introduced, a stone will be the consequence; and its increase, will depend entirely on the state of the system. If the person should enjoy uninterrupted health, it will not increase and vice versa.

September 3d 1827 Mrs. S. aged 38. was taken in labour, and in consequence of the case proving to be difficult. Dr Macgill was called to visit her: after a tedious and protracted labour and great suffering she was delivered of a son.

September 4th she spent a restless night and complained of considerable pain about the, hypogastic region, and had not passed her water since she was delivered: On introducing the catheter a considerable quantity of water was discharged. Ordered a cathartic - oleum ricini; on visiting her in the afternoon the oil had operated

freely, but no water had passed since morning: A flexible gum Catheter was introduced, and left to remain in the bladder, that the water might be drawn off, as often as might be necessary.

September 5th, she remained free of fever and had a good night rest, the Catheter suffered to remain in the bladder. from this time no unpleasant symptoms took place: On the 8th day the Catheter was removed, and the bladder had recovered, sufficiently to pass the water per urethra

About two months from the time of delivery, the Dr was requested to visit her again, and was informed that she had been labouring for six or eight days, with considerable pain in voiding urine. From the symptoms of the case the Doctor, was of the impression that she laboured with a stone in the bladder. He was desirous of sounding, for the purpose of ascertaining the nature of the desease.

The patient would not submit to the operation of sounding, believing that she was labouring under a prolapsus uteri; an anodyne was administered to afford temporary relief; and she was informed that unless she would submit to an examination, that he would no longer attend her. No more was heard of the case untill the third of May; when he was again called to see her, and found her labouring under a severe paroxism of the Stone. She informed the Dr. that she had consulted other Doctors, and had taken great variety of medicines without deriving any benefit from their use: and so crusiating was the pain that she was willing to submit to any operation that would afford a prospect of relief. but requested if possible that the operation might be performed without any assistance —

May 12th the Dr. visited her for the purpose of

sounding her, and perhaps if he should find a stone present to remove it instantly; not intending that she should know, that he intended to perform the operation immediately. On sounding a stone of considerable size was felt; the sound was then withdrawn — a strait director introduced and the operation, was completed with the Scalpel. The forceps was then introduced, and a stone extracted, two inches in length and one in width — the patient recovered rapidly and to this day is in perfect health —

In the above case the Nucleus was formed when she laboured under retention of urine, and in consequence of the derangement and debility after delivery, the stone rapidly accumulated around its Nucleus, and altho, it was but eight months from the commencement, It was much —

larger than several, that I have seen extracted from the bladder after afflicting the patient fifteen or twenty years —

The Stone once formed Lithontriptic medicines may be as well laid aside, and if the patient is desirous of having permanent relief, he will be compelled to resort to the operation of Lythotomy. For the purpose of extracting the stone from the bladder a great variety of methods have been proposed: but since the adoption of the Scalpel little or no improvement has been made. It is true a great variety of gorgets have been invented, and many of the modern surgeons recommend their use, but as I have witnessed the operation with the Scalpel repeatedly, I am disposed to adopt it, in preference to the gorget —

It has been suggested by Dr. Jemmerson that after the

operation, we should endeavour to heal the wound by the first intention, and for this purpose, he recommends that the wound should be closed by one or two sutures. Many years ago Le Raques a celebrated Lythotomist who operated by cutting on the grisse, was in the habit of making the external incision, not to correspond with the internal, for the purpose of having the integument to act as a valve. He then plastered up the wound with eggs and flour, for the purpose of closing the wound in the first intention.

It would appear to me that had the practice of Le Raques succeeded, it would not have been discontinued, as healing the wound by the first intention, would greatly add to the comfort of the patients, if we could succeed in our endeavours to accomplish it, without endangering their lives.

Dr. Gemmerson has not mentioned in his essay, the

attempt made by L. Raoul; and the confident manner in which the Dr. speaks of the practice in his essay published in the Medical recorder, caused Dr. Macgill, to adopt the plan of uniting the of the wound by sutures: As I witnessed the operation I will endeavour to present a brief view of some of them —

The first patient was a boy of aged 5 years, who laboured under the desease from infancy — the operation was performed with the scalpel; and a stone about the size of a marble extracted without any difficulty. The lips of the wound was united by two sutures, — a gum elastic catheter was passed into the bladder per urethra, and the patient placed in bed

The evening after the operation, the boy suffered considerable uneasiness — the water passed freely thro. the catheter

On visiting him the following morning found that he had spent a restless night - fever considerable Ps. & ordered a cathartic, on visiting in the evening found the uneasiness to continue and it was thought advisable to remove the catheter, It was removed & the water passed in the course of a few hours thro,, the cut, from this time the unpleasant symptoms were removed - and the cut healed about two weeks from the operation -

The second case was a boy aged 20, the operation was performed and the same plan adopted = but owing to the unpleasent symptoms, we were compelled to remove the catheter. the water passed thro,, the cut - the patient recovered in the course of 3 weeks -

The 3d case was a man aged 23, the patient was operated upon, with the scalpel and an endeavou

made to heal the wound by the first intention. It failed as in the previous cases the catheter was removed —

The 4th case was a man aged 60, the operation was performed and willing to give the proposed method a fair trial, the wound was united by sutures, and a large gum elastic catheter introduced; the evening subsequent to the operation the patient complained of considerable uneasiness and attributed it to the introduction of the catheter. the water passed freely thro' the catheter and hopes were entertained, that the wound would unite by the first intention. The following day the patient laboured under considerable fever, and complained of pain about the region of the bladder. In the afternoon the fever had increased, and on examining the wound, the external lips had united; but owing to

the great uneasiness it was thought advisable to seperate the lips of the wound; the sutures were removed and on seperating the lips a considerable quantity of urine had collected between the external incision and the internal. The wound in the bladder had no appearance of uniting. Death took place the 8th day from the operation and was attributed to the infiltration of the urine, caused by uniting the external incision by sutures.

The ill effects of attempting to unite the wound by the first intention was very perceptible in the above case; as Dr. Macgee has given up the practice having failed altogether in uniting by the first intention in the above cases: and he is of the impression that injurious effects took place in all the cases in which he had made the experiment. I have witnessed the operation performed by the Dr. frequently since and invariably with success & have

now proceed to describe the method adopted by him — and in the first place it will be necessary for me to mention the instruments which I have seen used, and which I would prefer in performing the operation: A scalpel: a staff or director, with a groove on the convex part and forceps, those are the instruments that may be requisite in the majority of operations for the stone. But a surgeon should be provided with instruments for breaking the stone, should it be found necessary. he should also be provided with forceps and needle, such as are used in placing a ligature around the pudic artery — tenaculum — sponge — ligatures and a syringe will also be requisite —

It would be advisable previous to the operation, to put the patient under a preparative course of treatment. bloodletting — and cathartics of calomel & oil, continued for a week or ten days confining the patient for the same, time to an abstemious diet, will generally prepare the system for the —

operation

The Rectum, should be emtied by administering an enema: The urine should be retained in the bladder, if it can be done conveniently. An opiate should be administered; after which the staff should be introduced, and the patient placed on a table and bound in the usual method. A folded blanket placed under the hips: the operator to be so seated, as to have his breast on a line with the perineum: an assistant will then hold a staff with his right hand inclining the handle to the right groin & the convexity to be prepsed against the left perineum: the scrotum, to be held up by the assistants left hand. The operator is then to notice well the ramus of the ischium & stretch the perineum towards the right side with his left hand, and with the common scalpel, the size to be in proportion, to the age of the patient, he is to make

an incision, three or three and a half inches thro. the skin and muscels, this cut is to extend obliquely towards the left side - and about three forths of an inch from the ischium running parallel with the ramus of the bone —

The surgeon is now to feel for the groove of the staff with his left fore finger; and cut immediately thro. the muscels towards it making the wound in the same direction as the first incision. He will now enter the groove of the staff and the point of the scalpel is to be placed in it, with the back of the scalpel resting towards the groove & holding the scalpel at a considerable angle with the staff: it is to be thrust along the groove untill the prostrate is divided: the fore finger of the left hand is to be carried along with the scalpel untill a division of the prostrate has taken place. The surgeon

will now withdraw the scalpel and the assistant will remove the staff, the surgeon left before finger remains in the wound. he may now take the forceps and pass them in the bladder, the left fore finger, serving the place of a director. Immediately on the stone being removed the bladder should be washed out with barley water to remove any particles that might remain: A gum elastic catheter should now be introduced into the wound — dry lint should then be applied to the cut, and the patient put to bed, a vessel should be placed to receive the urine as it passes from the catheter; the catheter to be ~~fixed~~ retained until suppuration has become completely established the after treatment, to be adopted according to circumstances

An Essay
on the
History of Medicine
by
William H Johnson
a
Candidate for Graduation
in the
University of Maryland
Course 1829 & 30

To attempt to trace at length the probable origin of medicine would be idle speculation, or to determine whether it be the result of random experiment, of imitating the instinct of Brutes, or of Divine Inspiration.

Disease is the lot of Humanity, and remedies, or attempts to relieve must be coeval with disordered functions

The means of procuring relief was to expose the patients in the markets or streets & highways and thereby to obtain if possible the advantages of greater sagacity and more extensive experience. All who passed were compelled to propose a prescription for the unfortunate sufferer and thus when sagacity and opportunity were combined with memory, they constituted the physician of rude ages as they too often constitute them of the present time.

Priests as possessing more leisure and more frequent opportunities of observation, were probably the first practitioners of medicine and accordingly, the most successful physicians were soon Deified. Superstition gradually mixed in the scene, and dreams and incantations soon dimmed the glimmering light which experience had suggested. Yet however superstition and design may have corrupted the fountains, the stream appears to have been preserved with tolerable purity by means of the temples, for these were the receptacles of the earliest records, and patients recorded histories of their diseases. From the Temples of Esculapius, Hippocrates is said to have drawn some of his best observations.

To the Egyptians, medicine as well as every other science is

qually indebted. But their real knowledge in medicine is not easily ascertained. when Prosper Alpinus wrote, improvements in the science had already been made.

Blumenbach tells us that the process of embalming was hastily and rudely conducted. and we cannot attribute any scientific knowledge of medicine to those who confined the management of each disorder to a single family, a single disease to one practitioner and limited by Law the use of medicine to a definite period of the disease. To them we are indebted for many valuable prescriptions of the present time. and certain it is that they excelled in prognostics which must have been the result of careful observation Galen, while he highly commends this talent, attributes it to Astrology their remedies were chiefly dietetic. The events of the Trojan war which called for the interposition of art, were chiefly if not entirely external injuries and there is no reason for supposing from the language of Homer that internal remedies were at any time used. Nepenthe was perhaps the only instance. If the Temples of Philostratus were at a subsequent period crowded with votaries who sought his aid in Intermittents, Dropsies, Consumptions, &c we must rather attribute the removal of the complaints to the arts of the Priests or the credulity of the votaries than to the interference of the accused Hero, who is not represented as having possessed any medical powers.

Esculapius who accompanied the Argonauts is not mentioned in the Iliad but his fame was preserved in his temples.

Of the Rhodian and Italian schools, established by the descendants or priests of Esculapius we have few remains. Galen gives some hints of the latter. The fame of these schools and of

the Philosophers was soon eclipsed by Hippocrates who seems to be the first to whom the appellation of Physician in its modern acceptation is due.

He first seperated it from Phylosophy; gave it the form of a distinct science, and personally observed the progress of diseases and the effects of remedies.

Of Hippocrates it is difficult to speak with impartiality in a manner that will satisfy his warm admirers, or those who reject every thing that is not of modern era.

If we look at him as a Physician, when medicine had scarcely escaped from the trammels of superstition, or the refinements of Phylosophy, our admiration must rise almost to enthusiasm. for we perceive a display of sound Judgment; acurate reasoning; and acuteness of observation far superiour to the state of science and the Era in which he lived. But to study and admire his works at the present time is verry different. science, has opened newer and more extensive views diseases are distinguished with greater acuracy. and remedies being more numerous may be better adapted to the consequences As however he fills so vast a space in the medical science I may be permitted here to take some farther notice of him.

Hippocrates was born in the Island of Cos 460 years before Christ He is believed to be a lineal descendant of Esculapius the family under whose direction the Coan school attained its high degree of eminence and by his mothers side, he is said to have descended from Hercules.

Born with these advantages, and stimulated by the fame of his ancestors, he devoted himself to the study of the healing art. Disgusted with the Empiricism which had been practiced

by his ancestors he determined to judge for himself and to adopt those principles only which seemed to be founded in sound reason. He was thus enabled to throw light on the deductions of experience, and to bring medicine into the true path of observation under the guidance of reason, hence the Physicians of the dogmatic sect always acknowledged him as their leader
The events of his life are involved in obscurity and fable, and to distinguish his real works is therefore a difficult task
Yet even the undisputed works of Hippocrates should be received with some hesitation; the criteria by which they are decided are by no means infallible and they shew rather the state of medicine in the earliest eras, than what may be styled the system of an individual. they are objects of curiosity rather than of use
Yet the writings of Hippocrates merit attention
When the title of Doctor is assumed merely as a claim to receive the fee of a Physician, it is of little importance whether he can read or not. the world is contented to take his talents on trust. But the man who claims the rank of a regular, well instructed Physician should not be ignorant of the language of Hippocrates, or the state of Physick at the earliest period of recorded observations. He will derive no little satisfaction from the terseness of the Hippocratic style, from the candid relation of facts whether favourable or otherwise, and from the firm unvariating integrity which seems to have regulated the conduct of this Father of medicine. But various are the authors who have treated of Hippocrates and his system, without knowing that in the same volume, works unworthy of any author of credit were compounded with his name.

he tenet of Hippocrates, that a knowledge of nature is the first principle in medicine, has been quoted with great zeal to prove that he who saw this position in so strong a light must have been acquainted with the structure and functions of the human body. But his anatomical knowledge must have been very limited as the dissection of Human bodies was prohibited by Law. And in his work on the bones, he describes the spine as consisting of twenty Vertebræ only.

The Hippocratic Pathology might be offered in a neat compacted system were the work on that subject certainly written by the Father of Medicine. It is however generally and deservedly removed to a later Era.

If however, his works be examined, it appears that he attempted to fix the seasons, and examine their different influences. The prevailing winds and the situations of Marshes & Mountains he describes with great precision, and pays peculiar attention to the age, mode of life, constitution & diet of his patients. The histories or dayly progress of diseases he has described with great accuracy. Nor are his remarks, though not strictly applicable in our climate, and in constitutions so totally differing by a verry opposite mode of life, wholly useless at present.

Observation seems to have suggested, what have been styled critical days. Nor though he hints at a supposed harmony of numbers, is there any real evidence to suppose that the doctrine was suggested by it.

His observations on the pulse are few and indistinct. On the excretions from the lungs, Stomach, or bowels, peculiarly

distinct and pointed, and on the appearance of the features and state of the body full and discriminated. Yet with all these aids he considers the prognosis of acute diseases as uncertain He diligently investigated the causes of diseases, but especially their symptoms which enabled him to distinguish them from each other.

He acquired a high reputation among his countrymen and his opinions have been respected as oracles not only in medicine but in courts of Law. He has shared with Plato the title of Divine Statutes and Temples have been erected to his memory, and his altars covered with incense like those of Esculapius himself, and after attaining the age of nearly an hundred years this great Father of medicine died

Greece now became subservient to the superior genius of Rome and we must there look for the progressive steps of improvement in medicine, Rome, formed by the rude tribes of ferocious bands, wanted for many ages little more than those Chirurgical aids which their mode of life rendered indispensable Though epidemic fevers were occasionally violent and fatal produced by the Pontine Marshes which were at no great distance from this Capital of the World, Yet for nearly six hundred years they were said to be without medical aid and their only resources to have apparently been blind Empiricism, superstitious charms, or religious ceremonies.

Temples seem to have been erected to Febris and thus their most destructive enemy raised to the rank of a goddess & worshipped Subordinate Deities of the same kind were introduced in various parts of the city, and no less than three Goddesses

were propitiated by offerings to confine Sylvanus, who was supposed to be inimical to women in childbed

Pliny, from some motive which I am unable to define, fixed the period of six hundred years during which no Physicians were to be found in Rome, but it must be obvious that this could not be strictly true, for some resources either ridiculous or superstitious must have been sought for when disease prevailed.

Many works have been written to prove that the Physicians of Rome were Slaves, Libertines, or Foreigners, and the opponents of this opinion were equally voluminous. I am induced to believe that many of the Practitioners were of the former description, but certain it is that many of them were of a superiour character. Archagathus was received with great ardour and a house was purchased for him, nor on the decline of his credit was he deprived of it. He was also raised to the rank of a roman citizen, and their Laws declared that if any Physician neglects a slave after any operation, he shall be pronounced guilty of a crime.

By the same Law an action shall lie against a Physician who by the unskilful use of the knife or of medicine shall kill a slave.

These regulations must relate to freemen for the Aquilian Law is confessedly anterior to the age of the Cæsars, for all Physicians were by Julius Cæsar raised to the rank of Roman citizens.

Celsus is said to have been a roman and though he frequently speaks of his own observations he certainly was not

a regular Practitioner of medicine, for when Pliny speaks of the Physicians of Rome the name of Celsus is never mentioned
In his works he chiefly follows Hippocrates particularly in his histories of diseases and his prognostics except in relation to critical days
I will now advert to that revolution which for ages gave a stability to the science of medicine and fixed an oracle that for more than thirteen hundred years dictated to the world, and whose decisions were listened to with the most implicit satisfaction
I allude to Claudius Galenus who was born in the reign of Severus in the second century of the Christian Era.
He studied at Alexandria but practiced chiefly at Rome, and was the Physician of the good Marcus Aurelius one of the few Emperors who added lustre to the Purple
Galen was distinguished in his earliest years for a lively fancy and uncommon ingenuity.
He attained all the learning of that Era, and was soon disgusted with the prevailing systems of medicine.
He professed to select from each what was most valuable but has almost entirely confined himself to commenting on and illustrating the works of Hippocrates which he says succeeding Physicians either misunderstood or misrepresented.
Galen wrote very profusely on every part of medicine but he added only dress and ornament to the system of Hippocrates.
Indeed, minute distinctions and sound reasoning are all for which the world is indebted to him. The doctrine of concoction a fatal Idea was established in his school.
The splendour of Galens talents and fame so completely dazzled

his cotemporaries and successors that we afterwards find but few who dared to think beyond his circle

I will now pass on to the seventeenth century leaving behind unnoticed all the intermediate cultivators of the science as they were only the followers and illustrators of Hippocrates & Galen. The conclusion of this century was distinguished by some of the brightest luminaries that have ever adorned our science, amongst whom Sydenham, Morton, & Baglivi hold an elevated rank Boerhaave perhaps may be said to have stood foremost in the ranks of this Era. From the Chemists and the Mathematicians he drew his theory, but his practice was founded on the sound principles of the Coan Sage and his followers.

The fatal doctrine of concoction held its ground and was supported with great zeal. Thus fever was not to be checked but rather encouraged, destructive delusion, Millions have fallen victims to this fancy.

While Boerhaave held the reins of Empire and ruled with a sway almost as absolute as that of Galen two rivals arose who overturned his apparently well established dominion Hoffman and Stahl were rival professors at Halle yet without acrimony and without at least open opposition. Hoffman was a voluminous writer but not the founder of any sect for his reasonings are said to be inconsistent and his arguments directed to no definite system. He wanders from the mechanical to the Chemical doctrines but in the midst of these directs the readers attention to the exertion of the vital powers in changing the direction and the balance of the circulation

Stahl with scarcely less industry, but with acuteness & talents

eminently superiour, aimed at changing the whole of the science.

He acknowledged with Vanhelmont a ruling power guarding the constitution against disease and repairing every defect that might occur, but with this superintendence he considered the human system as a living and an irritable machine susceptible of various and irregular motions, and consequently of topical congestions. Whatever becomes of this idea it is evident that the germ of this new doctrine gradually expanded

Even Boerhaave in his later years did not reject the consideration of a nervous fluid though consistent with his humoral pathology he considered it as inactive. And Gaubius his successor treats at some length on the diseases of the vital solid

Haller, though chiefly of the mechanical sect, and who is intitled to our gratitude for his industry rather than his genius agitated this new revolution by his experiments on irritability. And Dr Cullen at last constructed on this ground a system highly ingenious though like most first efforts, too refined & sometimes incorrect. on the same foundation Dr Brown has still farther refined, but while the Boerhaavians made the human body wholly material, he considers it as entirely spiritual, created only by heat motion and other stimuli

I will not comment on Physicians of the present Era the advancing condition of our science speaks a language that my pen would fail to portray.

I may be permitted in conclusion to make some remarks

on the talents and acquirements necessary to constitute a physician

It would appear superfluous to say that a Physician should at least be acquainted with the dead languages did we not daily see pretenders to that character without even a knowledge of their own

If, as has been supposed, the practice of medicine requires the active exertion of the intellectual powers with their full energy, it will at once be obvious that every method by which the Physicians views are early contracted must be injurious.

For this reason to spend the first period of his life in an Apothecaries shop has appeared a plan of the worst tendency, for this is the time in which he must endeavour to attain an intimate acquaintance with the classics, a competent knowledge of Mathematics and of natural Phylosophy

Man, the most glorious work of the creator, within our limited ~~knowledge~~ observation is not indeed regulated by the laws of matter and motion but each must be often taken into our views, in reflecting on the deviations from health and the means for restoring it And so intimately is every part of Natures works connected that we cannot draw the line where the vital powers begin and those of matter and motion end.

Mathematics are highly necessary to enable the student to follow the mechanical Philosopher and

to understand the mechanical Physician. For it is highly disgraceful in the modern Physician not to be acquainted with the principles of every sect or unable to comprehend their mode of reasoning without mathematics Haller and Van Sweeten will be often unintelligible. The utility of mathematics is not confined however to their aids in pursuing other objects. They accustom the mind to close abstract investigations, & give a habit of connected and accurate reasoning.

Natural Phylosophy is highly necessary independent of its connection with matter and motion.

We are advancing rapidly into those branches where, as in the human body, we see effects without being able to comprehend causes. I allude to the sciences of Electricity & Galvanism for I believe that the time is fast approaching, that by the aid of these we shall be enabled materially to illustrate the functions of the human body

Chemistry is now acknowledged to be an essential part of the Physicians education, nor should any science which is ornamental in a gentleman be omitted Geography for instance may appear far from a necessary branch of a Physicians education but it would be disgraceful to speak of Ipecac as a production of Russia or the cinchona of the Arctic Circle. All these are, or should be preparatory sciences, for medicine itself is a study which will

fill all the time usually allowed for its attainment where then can this varied knowledge be acquired? Not behind the counter, Not by dispensing the prescriptions of others. Nor by staring at diseases without information or without principles. In this way the student either acquires no knowledge or crude imperfect Ideas which he can scarcely ever correct. this kind of education also narrows the mind in another point of view we look with some partiality to our earliest instructor, our first Ideas stick to us with peculiar force so that it is of consequence where they are acquired

It is important that he who is designed for a Physician should be educated from his earliest years with a view to his future profession. if the best parts of his life have been directed to other pursuits he will seldom acquire that extent of information and readiness of application which the practice of his profession requires. It is not however enough to possess knowledge but the mind should be ready and active in its application. it is often necessary to adopt at once a plan and pursue it with active decision. it is necessary to weigh contending difficulties and at once to seize the path where the fewest or the least important appear or where the inconveniences are counterbalanced by the advantages. this rapidity of decision the result of great and extensive knowledge as well as readiness of resource is often the offspring of ignorance.

No difficulty can be experienced by those who are unable to anticipate danger. Physicians are called on in general to act with this decision, and to hesitate is usually accounted a mark of ignorance. A man must have merited the confidence of the world before he can require time for consideration and his reputation be firmly established before he can own himself at a loss

The mind of the Physician should in the most arduous and difficult circumstances be unruffled Doubt and hesitation should never be seen in his countenance In the midst of uncertainty he should be calm, and in the most adverse events he should never appear without his resources nor until the case be wholly desperate should he suffer those around him to despair

Wm H Johnson

An

Essay on Trachitis

By

Denis Delany

1830

To

Doctor James B. Stansbury

This essay

is

Respectfully inscribed

as a

Slender tribute

of

Gratitude

and

Friendship

In compliance with the mandate of the Uni
versity, in which I have had both the honour and
advantage of first receiving those principles of
medical instruction, that are the groundwork of
my future superstructure in medical and Surgical
science, I offer the following remarks upon an
affection, which from its frequency and fatality,
deserves the particular regard and consideration
of every physician. Not, that I can suppose, nor
indeed, can it be expected, from my limited observa
tion, and experience, to throw any additional
light either upon its pathology, or treatment. all
that I propose, is only a review of its pathology with
its symptoms and cure.

Trachitis or Croup is a disease on which there
a difference of opinion, existing among medical

writers, both upon its pathology and treatment. Ettmuller describes this affection as a Catarrhus Suffocativus, and supposes it to be a distemper, in which, the trachea, larynx, and especially the epiglottis, are primarily affected, and believes it to be consequent upon irritation, which arises from an acrimony or saltness of the Lymphe. We find it described by other medical authors, under the appellations of angina Stridula, Cynanche, ~~Cynanche~~ Laryngea, and by our illustrious countryman Dr. Rush Cynanche Trachealis. We shall however for its simplicity, adopt the term used by Dr Hasack.

Trachitis or croup; consists in an inflamed state of the mucous membrane lining the larynx, trachea, and in the severest cases through the

whole length of the windpipe. It is known by fever, a sonorous inspiration, and difficult respiration, which is greatly aggravated in paroxysms. This increased difficulty in the respiration, taking place in paroxysms, led many to suppose that there existed two conditions of this disease, an inflammatory, and spasmodic species; however according to Thacher no practical utility can be derived from this distinction; as according to him, these two states are combined in a certain degree, and happily those ~~those~~ means, which are acknowledged the most effectual, in counteracting inflammation, are such remedies as possess powerful anti-spasmodic virtues. We are from our own observation induced to believe, that it is impossible for the muscles of the larynx, ever to close

the rima glottidis, and when ever this effect is produced, it is the result of violent inflammatory action. It affects children between the age of three, and ten years; but those under six months are not so liable to it, as they are after that period, to the age of eight or ten years. Adults are not entirely exempt from it, as is remarked by Professor Potter who observes, he has seen upwards of twenty cases in the same number of years.

Ettmuller records the case of a young physician, of a strong and hale body, who suddenly falling ill of this desease, in twenty four hours died; and makes mention of his having seen four more, two of which only recovered; also does Dr Rush bear testimony of such cases.

In considering the symptoms of this disease, we

shall fun a it frequently commences without any premonitory symptoms; and, indeed, in so short a time, as not in the slightest degree to attract our attention. The description of an attack of this kind is so faithfully delineated by Dr Millar, that we shall quote his words, "Children (says he) at play, were sometimes seized with it, but it generally come on at night.—a child who went to bed in perfect health, waked an hour or two afterwards in a fright, with his face much flushed, or sometimes of a livid ~~color~~, incapable of describing what he felt; breathing with much labour, and with a convulsive motion in the belly; the returns of expirations, and inspiration, quickly succeeding each other in that peculiar sonorous manner, which is often observed

in an hysteric paroxysm. "The child's terror sometimes augmented the disease; he clung to the nurse and if he was not speedily relieved, by coughing, belching, vomiting, or purging, the suffocation increased, and he died in the paroxysm." But it is usually preceded by a fever, ~~with~~ cough, which is succeeded in a few days by a peculiar shrillness, and singing of the voice, as if it came through a brazen tube. In some cases, these latter symptoms show themselves from the first, coming on towards evening, and perhaps during the night, the inspirations following the cough are long, accompanied with the peculiar characteristic crowing noise. Dr. Rush say the cough resembles the barking of a young dog.

and this symptom is so universally present, that he always relied on it, as a pathognomonic sign of the disease. Fever comes on at first slight, afterwards becoming more severe; the pulse frequent and hard; with thirst, dry skin, &c. When the attack has not been very severe, the child retains its appetite and exhibits very few signs of disease, except when the paroxysm is present; then there is a slight hoarseness which almost invariably attends it, accompanied with a drowsiness, and the eyes watery and inflamed.

If something be not done to check the progress of the disease in the commencement, the symptoms become greatly aggravated, respiration becomes more laborious; the cough more troublesome; the pulse more frequent;

and expectoration more scanty, and difficult, until the patient dies of gradual or sudden suffocation. The duration of the disease is very various, depending in a great measure on the violence of the attack. In some cases it is so violent as to destroy life in twelve hours; in other cases in forty eight, or seventy two hours.

If the patient passes the first stage without having suffered much in constitution, the prognosis is generally favourable, although the cure is oftentimes tedious, and in some cases attended with the expectoration of a membranous matter, evidently the result of high inflammatory action, under which the vessels had laboured, and formed of the coagulable lymph of the blood, some organized.

Post mortem examinations, have discovered this substance of the shape of the trachea, and of a membranous appearance, not confined in all cases to the trachea alone, but extending to the ramifications of the bronchia; as in the case mentioned by Professor Potter in a note to "Gregory's Practice of Physic". The same sort of formation is observed by Dr Good, as taking place in the Diarrhoea Tubularis of his nosology; in which, as in croup there is an inflammatory affection of the diseased organ. It sometimes occasions death by blocking up the air passages, when the patient is much weakened and has not the strength necessary to dislodge, and remove it. Its existance is often indicated, by the manner in which the child breathes, throwing its head back so as to

put the trachea on the stretch. Croup follows sore throat, Measles, Small Pox, Scarlatina, and Cynanche Malignna.

The fact of its supervening upon these affections, gave rise to the distinction of an Idiopathic and Symptomatic species. But we wish here only to notice it exclusively, as a primary and local disease of the mucous membrane of the trachea, bronchia, and surface of the lungs.

However, it is of the utmost importance in a practical point of view, to distinguish it from other affections of the air passages.

The most usual exciting causes, are cold, and moisture; hence its appearance in autumn, winter, and spring. It may arise incidently by inflammation passing from the lungs. primarily inflamed, to the mucous membrane of the bronchia, and along that to the

trachea. Translated gout & rhumatism may produce it. It supervenes on Small Pox and Measles, when the patients have been exposed to cold; and in these cases the inflammation is very apt to attack the lungs, and frequently proves fatal; hence the necessity of guarding against exposure to cold, while labouring under these diseases.

Patients who have had it once, are very liable to have a return of it, more particularly, when from exposure to cold, they contract a Catarrh. It is not contagious in the opinion of Professor Potter. Dr Gregory however as well as Dr Cheyne, incline to the opinion, that it is so in some cases, which are very violent and particularly those attended with sore throat.

The Treatment of this disease was very well understood by the older practitioners. We find the ancients highly recommending blood letting & cariffication, emetics, and vesicatories

Ettmuller of whom we have formerly spoken, strongly recommends bloodletting both general, and local, with emetics, and sharp clysters; and under certain circumstances he gave opiates.

The medical writings of Cheyne, Rush, Good, Armstrong, Gregory, and others, have given us very satisfactory views of its treatment.

Gregory has divided the treatment into two kinds, suited to the two stages into which he has divided the disease, viz the first, consisting of that stage which is characterized by acute inflammatory action; the second, being distinguished by the formation of that preternatural membrane before spoken of. During the first, or inflammatory stage, chief reliance is to be placed on general and local bloodletting, afterwards calomel, emetics, warm bath, blisters, and occasional purgatives. A great deal of discussion has taken place, as to the quantity of blood necessary to be drawn in this disease,

lome advise it to be taken largely from the jugular in order the pulse flags; others condemn this ode of practice, and depend on local bleeding with ches, with doses of tranquilizing medicines, to reduce e circulation, and thus overcome inflammatory ction.

This discrepancy of opinion existing mong medical practitioners, upon the quantity n a manner of abstracting blood in this disease, o doubt, arose from the various grades in which ey found inflammatory action.

There can be no question upon the abso lute necessity of taking blood, and that too in quick time, and as copiously, as possible; olent and untractable is the disease in me cases; but the judicious physician should er bear in mind the age, constitution, and ne of its existence. That very young children n bear a sudden, and great loss of blood in y disease, we are very much disposed to doubt.

yet the knowledge of this fact, should not intimi
date us in a quick application of this potent rem
dy, in those who are fit subjects for its employ
ment. Dr. Rush who was perhaps as great an
advocate as any man in his time, or since, for
profuse bloodletting, in inflammatory diseases,
was disposed to believe, that there does sometimes
exist a spasmodic condition, counterfeiting
very active inflammation, which yielded to
antispasmodic remedies, particularly the
warm bath. We well recollect in the course of
our reading some observations made by Dr
Parrish of Philadelphia, where he states, he
saw this affection which would not yield
to antiphlogistic means, but was completely
relieved by antispasmodics.

We wish not to be understood in the fore
going remarks, that we advocate a spasmodic
variety of this disease, but we can very easily
imagine how the muscles may be made to perform,

spasmodic action; if we reflect on the vast
urgescence of the membrane lining, as well as the
uscles surrounding, the Larynx, by the enlargement
the capillary vessels, we can easily imagine
ow by this enlargement of parts, the rima glottidis
ay be closed.

Our opinion founded upon our read
ing and observation, inclines us to adopt early
na copious bloodletting, aided by large and
peated doses of calomel, with Tartarized Anti
mony. It is almost incredible to what extent
e may carry this remedy, in the subduction of
e highly inflammatory form of this disease.
e have seen 10 grs of calomel with one of
rtarized antimony given to a child two years old
t intervals of two hours for 20 hours with but
ttle emesis & cathartic with a complete ter
mination of the disease. It was the principal
medy of our countryman Dr Rush. he says
gave a large dose of calomel as soon as the

ease discovered itself, and smaller doses should
given every day, while any of its symptoms
continue. We might be asked in what manner
it supposed, Calomel acts in this disease:
on the Modus Operandi of medicines, we can
not but acknowledge much imperfection, and
indeed the Modes of operating of many medi
cines, are merely conjectural; but according
to Dr Rush, it acts by increasing the secretion
of mucus in the fauces, oesophagus, stomach,
and bowels, and thereby lessening the secre
tion in the trachea; He continues, that the anal
ogies of the secretions, and excretions, in other
parts of the body, whether promoted by nature
or art, seems to favour the conjecture.
We should be governed in the administration
of this, as of all other medicines, by their effects
produced on the patient. On this then, with
bleeding, every reliance may be placed.
It from the known operation of Tartar Emetic,

To

Maxwell McDowell M.D.

Professor of Institutes

in the

University of Maryland

This

Inaugural Dissertation

is

Respectfully dedicated

by

His most obedient

and humble Servant

L. P. Marchand

of Savannah Georgia

Baltimore 16th March 1830.

Crescit indulgens sibi dirus Hydrops

Hor.

A learned Physician has said,— Men of affluence have the choice of four alternatives,— to be sober & temperate, to take a great deal of exercise, or of Physic, or to be sick!

To illustrate these truths, would be superfluous. they cannot be denied,— but by those, who do not wish to understand them.

Fiat lux said the Lord, and light appeared in all its splendour, but it cannot enlighten the blind. to describe all the diseases, that spring from the omission of these rules, is not

my intention, as an enumeration of them, would be more, than the limits of this essay will admit, but a — description of them, would require Volumes. it would be a less laborious task, to explain such diseases as do not originate in rich intemperate living and idleness, than to point out, those which are them their commencement, their progress, and their almost fatal issue.

Among them, I have chosen Ascites, not that I have any thing New to communicate, but by an enumeration of a few of its causes, and by the avoidance of which we

may escape generally, a most fatal desease.

Ascites

This desease manifests itself, by an elevation of the abdomen, with evident fluctuation it commences generally by a swelling of the inferior extremities, pale countenance, thirst, slow fever, Dyspnoea, dry Cough, Cardialgia, Flatulentus, & Constipatio. Urine in small quantity sometimes limpide, at other thick and depositing a brick like sediment. the leanesse of the superior, and the Oedematous state of the inferior extremities, and of the scrotum and Penis -

are the unequivocal, sign of the disease.

Ascites can be complicated with other diseases, such as Tympanites, Pregnancy, Mola, and Leucophlegmatia &c. Et il arrive souvent, qu'on fait passer des grossesses de Contrebande, for Ascites, but they can easily be distinguished, besides the fluctuation which distinguishes the two Situations. We can also judge, by the countenance which bears the impression of the disease, and which is perfectly natural in Pregnancy. We can also feel the motion of the Fœtus.

We must examine the configuration of the Abomen, which is excavated

Rialy in Pregnancy, and bulged out in Ascites. We must also enquire whether she is regular in her Catamenia, &c. by ascertaining these, we will evade the imposition, which would be otherwise practised upon us.

It is difficult to distinguish true Ascites from encysted Dropsy, notwithstanding what has been said by authors on this subject, for in both encysted and diffused abdominal Dropsy, we have fluctuation, it is true that it is sometimes not very sensible to the touch, because the liquor is at times thick or enclosed in small cysts, but when the cysts occupies the inferior part

of the Abdomen, the fluctuation is equally manifest, as in true Ascites.

The liquid drawn by the Operation of Paracentesis from a Cyst, is most generally muddy, fœtid, Bloody, or Purulent, which is very rare, in true Ascites.

Encysted Dropsy, is longer in forming and the Patients retain their Colour, their Embonpoint, and their appetite, and the inferior extremities engourge themselves much later, and the Patients appear to suffer no other inconvenience, than the weight and size of his Abdomen.

It has been reported that as

high as 120 lbs. of fluid, was found in the Abdomen of an individual labouring under this disease.

Causes. Intemperance, Cachexia, Scurbutus, Gout, crupsive Hæmorrhage, Leucophlegmatia, Icterus, intermittent Fever, repercussion of Cutaneous Eruptions, drying of old ulcers, Fistulas, and such causes as impedes the circulation through the portal system of Vessels, among which are Visceral induration, particularly of the liver, and Spleen, which are the most Common.

But the most common general cause of Ascites is cold, either generally or locally applied &c.

Proximate causes, a morbid action of the exalents, of the Peritoneum, attended with capillary congestion, and diminished absorption.

Treatment - when the heart sympathizes with the primary local irritation, or with the morbid action of the capillaries, from which the effusion occurs. Blood letting is an important remedy. it is indicated in all cases in which there is tension, and quickness of the Pulse.

When the disease results from the effect of cold, its character is always inflamatory. the Blood drawn usually exibits the buffy Coat.

Diuretics are rather palliatives

than curatives, that is they evacuate the effused fluid, without correcting the morbid action, on which the effusion depends. the most useful diuretics are Squills, Digitalis, Cantharides, Acetate, — Nitrate, and Tartrate of Potash, Calchicum, & Juniper Berries.

Cathartics are valuable remedies in Ascites, not only to evacuate the intestinal Canal, but for their stimulant action, on the exhalent vessels, they are supposed, to diminish the fluids with regard to the whole Body, and by a similar operation, increase absorption, so that when the action of one is increased, that of the other is augmented. the increased

exhalation of serous fluid in the Intestines, which Cathartics occasion, causes, an increased absorption, and thus, that Dropsies are sometimes cured.

It is evident that those Cathartics, which stimulate the exhalent vessels, are best calculated to fulfil this indication, hence the saline, are the most serviceable.

Mercury is a remedy of valuable power in Hydropic diseases, given in combination with some of the Diuretics, particularly Squills, or Digitalis, it should be continued until the mouth is slightly touched, particularly careful when the Liver is concerned.

Diaphoretics, are indicated when

the Disease is the consequence of suppressed perspiration from cold, in such cases, Antimonials, Nitre, and Calomel, act beneficially.

Iodine has been recommended by Dr. Thompson, in Ovarian Dropsy, and other glandular diseases, and no doubt that it would be equally as beneficial, in Ascites, depending on obstruction of the Liver, or Spleen, on account of its deobstruent quality.

Blisters or Rubefacients, on the Abdomen, have been highly recommended, and no doubt from the stimulant operation which they exert on the System, may act beneficially.

If the above remedies fail the

must have recourse, to the operation of Paracentesis, abdominis, We ought never to Draw all the fluid off, at once, as it prostrates the patient to much.

If after the operation the Abdomen refills, in thirteen, or fourteen Days, we have very little hope for the recovery, of our patient, and we are forced, to reiterate the operation, to prolong the life of the sufferer.

But if we succeed in evacuating the fluids, we must administer Tonic remedies, such as Bark and Wine &c.

His aliments should be Dry

and nourishing and he should take as much exercise, as his strength will admit. he should wear flannel next to the skin, and make daily use, of friction with the flesh Brush.

By careful management we may perhaps succeed, in preserving our patient.

With this, Sir, I submit to your liberal examination

A Dissertation on Yellow Fever

By Charles M. Hubbard.

Virginia

1820.

To

N. R. Smith M.D. Professor of Surgery in the University of Md.

Dear Sir

Allow me the pleasure to dedicate these few ~~lines~~ pages ~~not known~~ to yourself, not from any ~~pecu~~ merit of their own, but as a sincere testimony of my esteem for you as a friend and at the same time acknowledge my obligations for the many invaluable lessons which I have received from you both in a private and public capacity upon medical and other subjects. for which gratitude the only offering I can make swells my bosom. I think the time is not far distant, when Genius must meet its reward, and when a free and enlightened republic shall hail you as the Ambrose Pare of America

I am with due respect &c.

Charles M. Harbaugh.

Not with standing the time that has been spent, and the talents that have been employed in the investigation of this subject, many points of past importance seem yet unsettled and are still the subjects of investigation. Epidemics have lowered around us and the genius of a Rush, a Potter, a Hosack, a Chapman &c. has been called forth in the common Cause of humanity, pages have been written, and reports given to the public, differing essentially no two, agreeing in touching every point. What Chart has been laid laid down by our fathers to guide the youthfull physician on with certainty of success to the scene of battle, with this mortal enemy of mankind. To whose writings shall we look for information. ~~upon~~, whether to the one of these great men we turn our eyes the dreadfull fact of discordance stares us fully in the face, and we turn away in despair & confusion. Then all that remains for us, is to weigh and examine, the principle facts & arguments contained in the writings of these great men, hold on to that which stands the test of reason, apply it to practice judge of its real value, throw to the winds those Hypotheses which are nothing but the wonders of imagination, the offspringes of some favourite but false & baseless theory. Both youth and inexperience forbid that light should fall from my pen upon this dark & abstruse question, but as the laws of this University require a dissertation upon some medical subject, before any disciple shall receive its honours. I from necessity bow to the authority and proceed to the task. There is a disease which occasionally makes its appearance in our Cities & Towns destroying their Citizens & threatening terror and devastation wherever it reigns. Like the Viper chilled by the wintry wind, it lies quietly at our feet untill called from its icy bed, by the congenial rays of a summers sun

it arises incensed with every surrounding object, breathing in each ~~surrounding~~ breath fresh new disease & death. Argus like always upon the watch tower and even the stranger and the traveler in passing by, draws in a breath which consigns him to an untimely tomb. It is known commonly by the name of Yellow Fever.

I consider this subject worthy of consideration from the fact, that amongst Authors of our own Country, men who have had ample opportunities of investigating this subject, we see them disputing, with much spirit when upon the most important points of the disease.

We first proceed to enquire into. Origine, Contagion, Contraction, Cause, and seat of the disease, and take notice of a few of the most prominent symptoms, in justification of the use of the two remedies which we consider to be of the greatest importance in the Correct treatment of the disease. For information upon this subject we are not compelled to look to foreign countries, we need not sail over the boisterous surface of the Atlantic to beg knowledge of the West India physicians; come here, go to Philadelphia, and investigate the writings of Rush, Potter Chapman &c. and all that has been taught of importance upon this subject we shall be able to learn. Read what Dr. Rush the first of our Countrymen who wrote upon this subject, with credit to himself and honour to his Country and profession, says of this disease, his ideas and observations, are worthy the man who gave them birth, and we now come to investigate the Origine. Disputes and Contentions have arisen amongst the faculty concerning the time and place of the first appearance of this disease, but we consider this a point of mere importance, and scarcely worth the consumption of our time in

its investigation. were we able to point out the very spot upon which this disease first made its appearance, could the how it first prevailed upon the world be clearly demonstrated, what would it profit us, should we be the better enabled to combat it, when it breaks out amongst us, we think every one would answer in the negative. Medical Philosophers are divided upon this point, one party loudly declares it to be a disease of comparatively modern origine, whilst another and an opposite set think it has existed time immemorial, and has been imported from one place to another. We think it ~~has probably~~ is one of the oldest diseases upon the pages of history. I need not tell you of the manifest changes our climate has undergone, they are manifest to the eye of the most careless observer. But as ~~the~~ all the materials for the generation of this disease have existed ever since the creation of man, and as endemics have existed according to the accounts of ~~Hist~~ Historians in Cities of the east, resembling in many important particulars this disease, and in this Country as well as Europe where by the providence of nature & the neglect and laziness of the people are thrown together certain materials which are acted on by other powers, we see the disease under consideration arise in all its power. A knowledge of the fact of the existance of the cause, and the agent to be acted upon, together with the effect, is in our opinion enough to settle the question but as it has no bearing upon the pathology of the disease, we leave it our object being only to enquire after that knowledge which may be usefull to our fellow man.

Contagion. claims a moments consideration in this place, for it

is still supported by some persons but very few those, and I am proud to say that in our Country, that monster Contagion. can scarcely find a spot whereon to rest. I would here ask the supporters of this opinion what they mean, by this word contagion, & if they answer what the word from its origine means, the impartting of disease from one affected body to another healthy body by contact, we declare it is not contagious.
When we look into the works of the venerable Rush, and behold the steps taken by the College of physicians to prevent the ravages of the disease, and attached to these rules I behold the names of Shippen & Griffiths, I am lost in wonder and amazement reason is at once dethroned and falls paralized to the ground. but when after the mighty shock she is recalled to assume her former empire we are constrained to deny it intoto. The Epidemic of Philadelphia as it is called in 1793. it was called contagious, when every breath of air was teaming with poisonous particles, spread over a large portion of the City by the wind which blew in that direction, it was inhaled by those exposed and because there was no person whose eyes did not far exceed the powers of the improved Microscope to see the cause which ~~whirled~~ over the City like a dark cloud, they allcried out with one accord. Contagion!! Contagion Contagion!!
Dr. Rush seems to have been disposed thus. Dr. Chapman in one sentance openly declares this not to be a contagious disease and says from his observations of the great crowds in the hospitals and the innumerable ~~effects~~ dissections made in that City convinced him that it was not a disease of that nature. in another part of his lecture upon this subject he cuts his own throat

when speaking of the reconbraction of the disease as we shall shew when we come to state his opinion on that subject.

And here as we shall introduce the opinion & Theory of Dr. Pollu our highly distinguished professor on this disease, we must say it one which has stood the test of a long and successfull practice guided by the most scrutizing judgment and observation. so far as we are able to judge he has written well. providence having assigned to him the task, of removing the rotten parts of the structure commenced by his preceptor, and building I may say a Theory, the Correctness of which can only be developed by time and Observation. his writings will be known & praised by physicians yet unborn and a great full posterity will entwine around his memory Monuments more lasting and secure than those of hass or stone ever raised to the blood stained Conquerors of Greece & Rome. he denies its Contagion and says this disease like Typhus fever has its cause floating in the atmosphere producing a disease of its own nature manifestly not Contagious, but indegenous whilst his experiments and observations substanciate the fact.

I have seen the inhabitants of Norfolk in Virginia, when the disease seized their having the town in every direction, after having been exposed for a certain length of time to the cause, and of those who abandoned the town, one man would have only a few premonitory symptoms, another the disease in its mildest form, whilst a third would have it in all its virulence, in proportion to the power of the cause applied to the System, together with other concomitant circumstances, whilst the Country people to whose houses they had fled, remained secure against the disease notwithstanding

the deaths of the townsmen all around them, and from the disease which they brought with them, for it is obvious they only brought with them the effects and not the cause of disease. The Country people who had not been to the town had at the same time in the same rooms, common agues & fevers the product of their own farms - and never to the astonishment of those ignorant of the nature and cause of this disease has there been a case of yellow fever from Contagion. I ask the supporters of this doctrine if they have ever traced small pox or Measles to its source, have the discoveries of man gone so far as to enable him to put his hand on the cause of either of those diseases, taking away the cause and arresting the progress of the effect. Have ever a case of either the above diseases Carried from a town to the Country, & the idle and Curious permitted to visit them at will, and the disease not imparted to them by Contagion. when these questions are answered in the affirmative, and acknowledged we will ground the arms of our ~~rebellion~~ controversy and acknowledge the incorrectness of our belief. As this subject is so intimately woven with the subject of Contraction that we shall make a few inquiries on the subject.

Dr. Chapman, in his lectures upon this subject, seems to view it a contagious disease, although in the former part of his lecture he denies it, he here assigns to it a property which is one of the most distinguishing symptoms of all Contagious diseases he says "it is my opinion that one attack prevents the system against any future one as small pox Measles &c."
We think the Dr. has been very unfortunate in his hypothesis a very scanty in his observations on this point. If the writings

of Rush are to be accreadited, he had the disease more than once the evidence of Dr. Potter is unquestionable, he proves in his practice the disease may be recontracted and as often as a man changes his residence in different climates and is exposed to the Cause he will unquestionably have the disease.
Sir Gilbert Blain gives it as his opinion that a man can only have the disease once, he like Dr. Chapman was to hasty in his opinion, he would as soon believe it a contagious disease as that it could not be recontracted and infact to speak thus is but a round about way to call it a contagious disease. Our professor of Theory & practice tells us he had this disease three times and that some of his patients it four five & six times, and these facts are sufficient to prostrate the opinions of Sir Gilbert Blane and Dr Chapman.
We now proceed to a grand essential to a correct knowledge of this disease. It is a knowledge of this which is to guide us principally to a successfull treatment, I mean the Cause of Yellow fever.

It is indeed true what gives rise to this disease can not be chemically demonstrated but it is the opinion of many medical men, amongst whom are the most celebrated of our Country and Europe that there is generated from the putrefaction of animal and vegetable substances with a certain proportion of heat and ~~cot~~ moisture something which they have been pleased to call "Marsh Effluvia". poisonous in its effects and producing on the human body wherever it is permitted to act, in ratio to its virulence and the length of time which it is applied to the system, together with the predisposition of the patient

a fever from the mildest remittant to the most malignant Yellow. The Philadelphia Epidemic of 1793. Dr. Rush calls a Bilious Yellow fever, a name which is not altogether so definite as we could wish and we hold improper to name any disease from a casual phenomena, and which if properly treated will rarely or never be found beside it is well calculated to lead medical men to wait for a certain appearance or symptom before they prescribe a certain remedy or upon the appearance of a symptom which is characteristic of a nother and perhaps a disease of an opposite nature, which might be fatal in its effects without due regard to the true state of the patients case. The Cause of this epidemic the Dr. ascribes to a putrefying bulk of Coffee and hides upon Balls wharf. and thus we see he ascribed this disease to Miasmata. The disease continued to increase in malignancy as the cause became more virulent or the people more sarcely predisposed, and by his industry and ingenuity he was enabled to trace the cause of this disease of each one of his patients to this common source. But when speaking of a predisposing, there is some difference of opinion and some confusion of writers upon this head. but we understand any thing which has a tendency to debilitate and wear down the strength of the system or vital energies. a predisposing cause may go so far as to put the system in that state, when the slightest cause or excitement may arouse the dormant and smothered sparks in to open and manifest disease.. How so much more readily and virulently would the Miasmata act on the system, as it had been previously acted on by any of the causes which wear down the energies of the

vis Medicatrix. the natural antagonist of disease. the Miasmatic Origine is also proved by Dr. Potter for he arrested the disease by removing a quantity of Vegetable matter from beneath the floor of a ware house in this city. Dr Chapman also thinks it the cause of the disease, and it appears strange how the Dr. from this circumstance of the nature of the ~~disease~~ cause of the disease, could have believed that patients were ever after safe the first attack safe from a second one.

The Seat and throne of this disease Dr. Rush tells us is the hepatic system, and his remedies were directed accordingly. "says Dr. Chapman" Professor Rush through out the whole of his life zealously and industriously maintained that yellow fever is nothing more than a higher grade of Bilious fever, that this is not true is clearly shown by the dissimilarity of the two Causes!!

We are inclined to think the only difference in the Aetiology of the two diseases is the degree of concentration of the effluvia, added by the vitiated atmosphere of a City. and a retrospective view of the diseases which immediately preceded the epidemic of 93 and the disappearance of these diseases upon the full developement of the yellow fever seem to strengthen the opinion. The very cause of this epidemic, in its first evolution of effluvia produced only remitting fever in many of the Dr.'s patients, and these very fevers gradually took on a more alarming aspect and character as the cause grew stronger untill the disease was fully manifest.

I cannot say with Dr. Rush that it is always a higher degree of Bilious fever, for it is often a congested low fever.

There is a section of this state State I am informed from unquestionable source, where the inhabitants have only remitting fever.

whilst others will have genuine Yellow fever, beginning with all the proper pathognomonic symptoms of this disease, and ending with black vomit & death. this seems to shew the identity of the two Causes.

Dr. Chapman takes from the Liver the seat of the disease where Dr. Rush with much propriety placed it and located it in the stomach!! "he says in post: mort: examinations we find an inflamation from the mildest blush to the highest grade, we frequently find the Duodenum in a high state of inflamation. but when speaking of the liver he says it is often found preternaturally enlarged, the Bile in the sack of a vitiated and acid nature and very much demenished in quantity whilst marks of different grades of inflamation are found" thus he acknowledges the liver greatly concerned. I do not believe with Dr. Chapman I believe the liver is more frequently the seat of the disease than any other organ; it is perhaps in more than 95 cases in the 100. We are not at all surprized to find no bile secreted in so many cases in dissections, for we have an opportunity of examining the very worst cases, so great is the shock upon the nervous system and the consequent congestion in this viscus and the whole hepatic circulation, that no bile is secreated or comparatively none, and that of the most morbid quality and demenished quantity That the Liver is as essential to life & health as any other organ in the human body, and when from any cause it is rendered incapable of performing its functions, and secretion stopped, disease is the inevitable consequence. does not the cessation of the natural functions of an organ tell of disease & to use Dr. Chapman's own words "we find the liver preternaturally

enlarged and much changed in its colour and natural appearance". In Common Bilious remitting fever, where the force of the poison is only sufficient to produce violent reaction in system with an obvious burning fever, there is a preternatural secretion the quantity is very much increased, and the quality vitiated, whilst in Yellow fever of great congestion owing to the high pressure of poison acting on the system there is none at all. The fever closely counterfeits Typhus (but can not be cured by the usual remedies of that disease). It can not be thought that the vomiting & nausea in this disease is owing to inflamation of the stomach, for it is too prominent a symptom in Bilious fever and the direct nervous communication between the liver Brain & Stomach sufficiently accounts for that symptom. In injuries of the head we see sickness & vomiting, and in diseased liver we find the brain at times affected.
Dr. Chapman thinks that the miasmatic particles are raised by rarefaction during the heat of the day, and fall with the dew at night, and this dew having the poison entangled in it is swallowed, and thus the poison is received into the system. I acknowled it almost impossible for me to conceive such a thing and if we allow its action upon the system through this medium, it appears that it would require a long time to drink enough of this poison to produce the disease. We should also recollect the fact that poisons taken into the stomach (some of them) undergo by the powers of digestion such a change as partially to decompose ~~them~~ or deprive them of their deleterious

effects, and in some cases entirely divest them of their poisonous qualities. There is a case reported to prove the non-contagion of this disease, and which shews that it is probable the poison does not act through this medium, of a man's swallowing a considerable quantity of Black vomit with impunity. We deem this hypothesis of the Dr. to be the "baseless fabric of a vision." but suppose the poison was always swallowed and applied to the stomach as the Dr. supposes it is nothing more than natural to look for the effects of the poison always there, which is not true, and whilst we are led to doubt the correctness of the Dr. opinion, we can but admire his ingenuity, it comes in like a skillfull partner and plays well into his hand.
If this opinion be true, how comes it that we see men coming into the towns & Cities where this disease prevails before the hours of 12 & 4 O'clock contract this disease they can not receive it through their stomachs for the dew is not yet falling. How shall we account for the fact of a man's traveling through a miasmatic district, and perhaps not exposed for an hour contracting the disease (Vomit: fever).
We dont positively know how the poison acts upon the system, tho it is perhaps as Dr. Pollin thinks through the lungs. If we knew positively upon what set of nerves it acted, or how it was conveyed through the system to different parts, we should have no difficulty in accounting for the production of Yellow fever, from Miasm applied. The Dr. shews more plainly his ingenuity in

in applying the principles of the Brussian Doctrine in this case, than the manner in which the poison acts upon the system to produce the disease. Shall we from the nervous Communication between the lungs and liver attempt to account for it through the medium of sympathy and the continuation of the poisonous effects from the lung to the liver. for we see on the onset of the disease great derangement of the functions of the lungs. Or whether from the acknowledged superior of the functions of the Liver in respiration, we are to account for the action of that poison through the medium of the Circulation, we can say nothing positively, it is all conjective. and we are not compelled to imagine immediate death from such a circumstance, whilst there are symptoms which seem to support ~~the to~~ such an Hypothesis. Why Marsh Effluvia appears to have an elective attraction for the liver we can not say. and we must suppose that the same channel through which poison is conveyed in common Bilious fever. poison is conveyed in Yellow fever. whatever that source be it is of little importance, since its effects are generally found there. Neither can we say why Marsh Effulva, produces Bilious fever & Yellow fever & why the have their seats commonly in the liver and Biliary system. Demonstrate the problem of one and the other is immediately solved. We can but think that certain poisons have an elective attraction for certain organs and tissues as well as certain medicines, and as it is the same poison that produces

as well as Bilious fever, we must naturally its acts in both cases on the same set of organs. Behold the action of Calomel how it acts by elective attraction up the liver & mucous upon the ~~skin~~, kidneys & Diaphoretics upon the skin, ask the question why ~~they~~ act thus, and silence will be the answer, every days experience proves the fact. and we should rejoice that nature in her good ness has wisely ordained such things. "The Black Vomit says Dr. Chapman is a vicarious secretion from the stomach and not bile" I do not believe it a secretion from the stomach, and if it were a secretion of a vicarious nature, how comes it to pass, that this vicarious secretion of an organ is the only one from which patients never recover, a perhaps not one in the hundred We see vicarious secretions from the liver, kidneys & other organs and yet upon putting these organs in a proper secreting condition patients recover. and says Dr. Potter "I never saw but one or two men recover after they had the black vomit. I am inclined to think that B V.* is composed of the mucus Coat of the stomach, disolved Blood & other fluids we can distinctly see flakes of this Coat floating in that fluid and upon inspecting the Coat of the stomach we see abrasions in many parts of that organ, and other signs of its organization and death. There is a black Bile which should be always distinguished from black

* writing the above in april 1829. Dr. Griffeth of Phila. has said something to her my opinion in the medical recorder.

Vomet. We judge from the well known facts, that the diseases of heat and warm weather are principally diseases of the liver, and heat acting as it is well known upon that viscus predisposing it to disease, thus we account for the superabundance of liver diseases in warm climates.
The Liver from the season of the year, the nature of the epidemics which prevail at that season, and the common remote cause (heat) acting upon that viscus renderers it undoubtedly the most probable seat of yellow fever. But we do not go so far as to say that the liver is always the seat of this disease, we are aware that some predisposing cause may from idiosyncrasy excite the disease and locate it some other part, as large draught of ice water, ardent spirits, indigestible food, which at other times might produce gastritis or cholera, also watching, great anxiety of the mind hard study will predispose the brain and rend it liable to be fixed on by the disease, hard exercises to debilitate the stomach and wear down its powers may serve as predisposing cause to locate the disease in that organ, which will assuredly follow if the patient be exposed to the effluvia, and there too under such circumstances be found the ravages of the disease: We argue that as the disease arises at that season of the year when heat is by far the most common stimuli to which we are exposed, and by long observation and nice dissection, it is found to act on that organ and predispose it to the action of exciting causes; we are bound to think with Professors Rush & Potter in placing the disease in the liver, without the least sha

of Contra coedence. The Symptoms which commonly manifest themselves are — Sighing — weariness — with a pain in the region of the stomach & liver, — tossing to & fro in the bed — .. These symptoms mark great internal congestion — In the most dangerous form of the disease the patient is alternately hot & cold — which is a manifestation of a large quantity of poison a danger on the system, almost destroying life itself, reaction can not be established — and yet if we stimulate as in Typhus we kill the patient. if it was at the onset of the disease we might take before we gave any internal medicine a few oz Blood, administering Calomel at the same time to purge freely and act upon the liver. The pulse after three or four free movements of the bowels which the Smallpox would facilitate, would it is more than probable rise so, as to require free & repeated bs.

Upon reflection upon the different epidemics detailed by prof: Potter it seems to be correct in laying down two general principles which may serve as in the management of this disease. I am aware that any regular set of rules laid down to be adhered to strictly, would be incompatible — it would not do to practice in every epidemic empirically, casual circumstances or symptoms would arise to arrest the attention of the vigilant practitioner. We may we think with great propriety divide this disease into inflammatory fever when the system has received not so much poison as to overpower the vital energies, they are able to make open and bold resistance against

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the enemy, the pulse, face & eyes all shew that the system is contending with great power and would soon ~~last~~ exhaust its strength - this is the first species requiring copious blood letting for its management with purgatives for no matter whether adisease be called Yellow fever Typhus fever Smale pox &c if the symptoms shew that the system is reacting upon itself destroying by its preternatural exertions its own power, it is our duty as guardians of health to obviate these symptoms by those remedies which common sense and experience have proven to be the natural antagonist. The Other Class is where so much poison has been taken into the system as to overpower the vis vitae Reaction can not take place, the force is too strong, there will be in this case all the symptoms of great Congestion, and here it is proper to recollect that this ~~poison~~ seeming prostration of strength is not owing to debility but to the Quantum of poison. This must be our knowledge & we distinguish our patient by what would seem the natural remedies called for by the prevailing symptoms. give one gr. Opii, X gr Ammo: S.° with one hand, and you bury with the other a dagger in the bosom of your patient. Congestion is the language of every symptom, the Organs especially the liver is stopped is stopped in its functions Secretion can not go on - its sensibility is lost - it lies inactive & it is this species of the disease which is buried most deeply in obscurity, and requires more discrimination & nicer management than the former.

let us look at the state of the liver and other organs. they are in a torpor and sleepy, and have ceased to perform their natural offices. To understand its treatment it proper that we should look for a remedy of a peculiar nature slightly stimulant for a moment & secondly powerfully evacuative. Calomel is in its first action stimulative to the liver, and it is called for to awaken the dormant energies of that viscus and arouse it into action. The treatment is the reverse as the former as the system is in an opposite state, we must have recourse to large doses of Calomel producing free evacuations, & perhaps bring into our aid Small bs. —
In convalescence, nothing which stimulates the patient should be suffered by any means, they will reproduce fever when the system cannot, stand the remedies to antagonize it — —. at present I have little faith in that class of remedies called Tonics, in convalescence from fever, for if one spark of disease remain it will likely call it forth into open flame — Nature is sufficient if we remove the offending cause, Sarsaparilla administered judiciously, is sufficient to increase the strength and tone of the system which been lost. ———

An Inaugural Essay on Cholera Infantum
Submitted to the Medical Faculty of the University
of Maryland by
Robert M Tutt, a Candidate
for Graduation. March 4th 1830

When this essay was written, in the fall of 1828, it was done only to amuse myself and pass off some leasure hours. I had not at that time the most distant idea of ever submitting it to a medical faculty as a thesis, for at the time of writing it, I had never attended a course of medical lectures. The opinions which I advanced were considered hypothetical by my friends, and opposed to all authority, but when I had the pleasure of hearing our learned professor of practice, Dr. S. Potter, I determined at once to submit the following pages as a thesis, as I found him kind an able advocate for many of the opinions which I advanced.

Robt McTurth

Cholera Infantum.

From the entire silence which the ancient Physicians have kept relative to this disease we must suppose it to be of modern origin, and indeed it appears to be exclusively confined to our own country, so far as I have been able to judge from reading, and in accordance with the opinion of the learned Professor of the practice of Medicine, Dr Nathaniel Potter.

Over our extended country, this disease makes its appearance, at that time, when the heat of Spring, succeeds the Cold of Winter. In the Southern States, it makes its appearance, as early as April or May; in the middle, between the first of May, and last of June, in Phyladelphia "it seldom appears before the middle of June, or beginning of July, and generally continues until near the middle of September". See Rush's Inq.s Vol 1 p 215.

The cause of Cholera Infantum, is not settled by Physicians. Those, which have been most frequently thought, to have produced the disease, are Dentition, Worms, Summer Fruit, Bad Diet, Indifferent Clothing, Miasmata, and Heat. Each, of these causes, has been warmly advocated, by able Physicians, but unfortunately for the science of Medicine, the dissentions still continue, without the slightest prospect of their shortly ending:

In the investigation of disease it is natural for us, to enquire first, into the causes of the disease; and secondly if a variety of causes, acting upon the system, can produce

the same disease. In this manner, we propose to investigate the causes, which have been supposed to produce Cholera Infantum; and the first which comes under our consideration is Dentition. That this process alone can produce, the disease, is so contrary to observation, as to appear almost a waste of time, to enter into any arguments to disprove it. If dentition were the cause, why does not Cholera make its appearance alike in all seasons? That dentition produces a train of diseases, is a fact as well established, as any other in Medicine. Acting upon the irritable systems of Children, any irritating cause, appears to disorder the digestive organs much more easily than in adults. Dr Burns, in speaking on dentition says, "if the child be very irritable, and the teeth advance fast or several teeth come forward at the same time, very unpleasant effects may be produced, such as severe bowel complaints, or fever, or spasmodic cought, or convulsions" &c &c. These remarks, are confirmed by a number of Physicians of equal authority. There can be no doubt that dentition very frequently, is an exciting cause, and always aggravates the disease. Cholera more frequently attacks children during the period of teething, it seldom makes its appear=ance before the sixth or eighth month, nor after the twenty fourth. Dr Rush, in speaking of Cholera says "dentition, I acknowledge, sometimes aggravates it, hence we find it is most severe in that period of life, when the greatest number of teeth make their appearance, which is generally about the Fifth month. I think,

I observe more children die of this disease at that age, than at any other".

Worms: The same objection to any infant, which is present at every period of the year, holds good to this, the disease under consideration, is an epidemic, appearing at a certain season of the year, while children are as liable to be affected with worms at one season, as at an other.

In a majority of cases of Cholera, not one symptom occurs which would lead us to believe that worms were present; and in post mortem examinations no worms can be found.

Summer Fruit: To this cause Cholera has also been attributed.

If this were the cause, why does not the disease prevail more extensively in the country, where fruit is much more abundant, than in the large Cities? Why does it not also attack children of three or four years old, who eat ten times the quantity of fruit, that children of a less age do? Why do we sometimes meet with this disease in April, or May when fruit is rarely to be met with? There is no doubt, that fruit disorders the digestive system very much, and that it frequently produces diarrhoea, and other diseases, which we meet with during the season, in which it is most abundant.

Digestion is more easily impaired in infancy than at any other age, as is seen from the frequent vomiting of acescent matter, and the appearance of fermentation in the faeces, after they are passed.

Fruit when taken into the stomach, impairs digestion in two ways, first by its liability to run into fermentation, and secondly, by its insolubility and resistance to the action of the gastric fluid. Dr Dewes in speaking of the comparative degree of facility with which substances are digested says, "of the vegetable class, fruit may be considered with young stomachs, of more difficult solution, than almost any of the farinaceous substances in common use, consequently must be less proper." It is in this manner, I think fruit may become the exciting cause of Cholera, when the system has been under the influence of the predisposing causes; thus we can account in what manner, Cholera was produced in the cases recorded by Dewes. He says, "we have witnessed, this season three instances of dangerous cholera, brought on by means of these fruits, (meaning the dew and blackberry) and one which nearly proved fatal from the use of the syrup of blackberries. See par 744. Dewes on diseases of Children.

Bad Diet and Indifferent Clothing: These can only be considered as exciting causes, and they appear to have very considerable influence on the Epidemic, the poor Children are peculiarly liable to this complaint, and the mortality, is much greater among this class, than any other, evidently shewing that bad diet and indifferent clothing have great influence upon the disease. These causes are alone capable of producing bowel complaints, indigestion, emaciation &c &c.

Miasmata: this poisonous, inexplicable, and subtile something which is thought to usher in more victims to the eternal shades, than all the other agents that contend against the life of man, is considered by a great number of enlightened physicians to be the only cause of Cholera Infantum. This protean vapour, like an avaritious viceregent, not content with the ravages which it makes upon man, annually, in the various forms of fever &c, has lately thought, it would be more acceptable to its grim master, Death, to send a few millions of infants to the stygean shades.

It is with diffidence, I dissent from the voice of authority, but when we are impressed with the belief of an error, by our reason: no matter how humble that faculty may be; would it not be better for us to express ourselves candidly, than tacitly assent to doctrines, which we are unable to comprehend.

The first objection, which we make to Miasmata as the cause of Cholera, is, That the disease is not always found, when our cities and country are affected with Bilious and intermitting fevers. This I think a serious objection, for would it not be rational to suppose, that if the same cause produced both diseases, they would ago pari passu. Might it not also be expected that the two diseases would have intermediate grades, and occasionally the types changing from one to another, as in remittent and intermittent fevers. So far from this, it is a fact established by experience, that children are peculiarly

exempt from Bilious fevers, and adults in no situation, or under any circumstances ever have Cholera. Another objection is, that instead of these diseases appearing at the same time, we have Cholera in the Spring, or early in the Summer, and bilious fevers prevailing in the fall. It is true that there are exceptions to this, for we sometimes meet with the different types of fever, in the Spring and Cholera in the fall months, but these exceptions prove nothing. How often do we see an Epidemic of the most alarming kind, where every variety of type from the mild intermittent, to the malignant yellow fever can be found, but not a single case of Cholera Infantum et vice versa. The reason that Cholera, makes its ap=pearance earlier than remittent fever, is attributed to the Constitution of Children, "being more predisposed from weakness to be acted upon, by the remote causes which produce those diseases". Does experience confirm this? I believe not. Do not Children bear surgical operations much better, and recover more speedily from them, than adults? Have we not instances on record, where the mother has been found dead, from the inclemency of the weather, and a living infant at her breast? What preserved the life of the infant longer than its mother? surely it could not be its weak and debilitated con=stitution.

If we were to admit that the "constitutions of children, were more predisposed, from weakness to be acted upon by Miasmata", what would it prove.

That if a small quantity of miasmata, mingled with the atmosphere, were capable of producing cholera; as it becomes more dense, and pervades a larger space, in the same proportion, would cholera become more malegnant. and that September would be the month of the greatest mortality; also that in those districts of country where bilious fever rages with great malegnity, there also would be a sufficient quantity of miasmata to produce cholera by acting "on the constitutions of children, already predisposed to be acted upon from weakness".

Heat: This is the last cause, to which cholera has been assigned, that I shall notice; and to this alone as the predisposing cause, do I attribute all the cases of cholera Infantum. The vicissitudes of climate, exert a wonderful influence, on the constitution of both adult and Infants, producing a number of diseases and changing the type, or character of all diseases of an Epidemic nature. Man is capable of resisting a certain degree of heat or cold, for a short time without any visible change being produced on his constitution; but if he continue under the influence any length of time, the effects will be visible.

Heat and cold are relative terms, and we judge of them, by the effect they produce on us. A certain degree of cold, exerts a tonic, and invigorating influence upon our constitutions, causing all the vital functions to be carried on more vigorously; and our diseases to

be of a more inflammatory character. Beyond this cold produces direct debility, and if carried sufficiently far will produce death.

Heat acts upon the system, in a twofold manner; first as it does upon matter, secondly, as upon vitality. First the effects of heat upon matter. It is a law, and to which there can, but few exceptions, that caloric expands matter, by producing a seperation, of the atoms of the part, and this law, in my opinion, exercises its influence, as much upon our systems as upon any other matter. The languor and inertness, which we feel during warm weather, and which is more percep-tible after a sudden change of cold, to warm weather are, in my opinion, measurably produced by the sud-den expansion or relaxation of the solids and fluids.

The second manner, in which caloric acts upon our systems, is peculiar to vitality. Its action is twofold. First by stimulating the system and secondly, by produce indirect debility. Heat as a stimulus is necessary to vitality, without it life cannot exist. Professor Rush in speaking upon this subject says "heat is a uniform and active stimulant in promoting life". The kind of heat the system is capable of retaining in an atmosphere, many degrees below it, but if the system were placed in a temperature, in which, it could not preserve a sufficient degree of caloric to stimulate

the vital functions to action life could no longer exist totally has also the power of resisting a greater of heat, without being impaired, than would be conducive to health, if it had not this power; but if the heat be excessive and it stimulates the organs to unusual action, they soon become wearied and then indirect debility is produced. This is the manner in which disease is produced. Professor Chapman in speaking on this subject says, "Heat directly stimulates the system, but its first effects are followed by relaxation, and exhaustion, which renders the system vulnerable to disease".

During the winter there is sufficient heat produced by various causes, to stimulate the system to healthy and vigorous action, but so soon as spring comes, the heat increases to stimulate the the system, which becomes fatigued from over action and then the debility follows; heat also acting at the same time upon our bodies, as it does upon other matter, as we have attempted to shew above, impairs digestion and lays the foundation for bowel complaints. These effects of heat we all feel more or less, but on the system of Infants, which are much more irritable than adults; the effects are by far more deleterious, especially during the age of teething, when children are so liable to Cholera Infantum.

That heat or rather the sudden changes of temperature from cold to warm, is the predisposing cause to cholera, we think, may be proven from the nature of the disease itself. Cholera makes its appearance ~~at that~~ season, when the system is more readily excited to un-due action, that is when warm weather suddenly cold, and before the constitution can adapt itself to the sudden change of temperature. Is it not at this time that adults feel the effects of heat more sensibly, than at any other? It is at this time, that the mind, as well as the ~~muscles~~ appear to be so completely unstrung, that action becomes so repugnant to our feelings. Now is the time, that we would enjoy "Lentus in Umbra".

A cool day frequently abates the violence of Cholera, and disposes it to a favourable termination How does a cool day abate its violence? Is it not by abstracting a great degree of stimulus, and leaving the system of the infant in a less excitable state.

Heat having already predisposed the system to disease, some exciting cause, such as improprieties in diet, bad clothing, teething, fruit, premature weaning &c produce the disease. and it continues to increase in violence, if not prevented by medicines until we have a cool day, when a portion of the stimulus of heat is removed and then the disease abates. In the same manner, is the beneficial effects of a removal from a "large City", to the country to be

accounted for, the temperature of the large city is several degrees higher than in the country, and by removing to the cool atmosphere of the country, you leave behind the cause of the disease.

The Prophylactics, are such means as will protect the system from the injurious effects of sudden and frequent changes of temperature, and which will keep up the tone of system. They are, the constant use of flannel next to the skin, cold bathing, mild and nutrient diet, and keeping the child to the breast, until the time of cholera is past.

The symptoms of cholera, are as various as the causes, to which this disease has been ascribed. It sometimes begins in the form of diarrhoea, at other times the stomach is primarily affected, and then the disease is ushered in with both vomiting and purging, sometimes it is attended with violent tormina. In its ordinary form it is attended with an irregular remittent fever, the exacerbations being highest in the evening. The pulse is small, quick and feeble, or corded and irritable, it is rarely full and strong

The circulation is very unequal, causing great determinations to the head, and abdominal viscera. The temperature is also as unequally distributed producing a burning heat over the head and trunk, and great coldness of the extremities. There is great tendency to stupor, or delirium, and in some instances there is Phrenzy. The eyes also denote cerebral

derangement, they are generally languid of expression but sometimes are very fierce, at other times they are very insensible, and the child sleeps with them half closed. Dr Rush says that "such is the insensibility of the system in some instances in this disease that flies have been seen to alight upon the eyes when open, without exciting a motion in the eyelids to remove them. The cerebral affection appears to be sympathetic with the stomach on dissection there is no diseased state of the brain to be found, in recent cases.

The thirst is very great, and frequently the irritability of the stomach is so great that as soon as water is swallowed, it is thrown up again, without satisfying the thirst or diminishing the clamour of the infant for water.

The evacuations are various, both in their colour and consistence. The natural faeces, are generally retained, while slimy, thin discharges, occasionally mixed with blood come away. The colour of the discharge may be greenish, yellow or Brown, or resembling colura carminno. They are sometimes inodorous, at others very offensive. In some cases the alimentary canal, becomes so irritable that the food, passes through unchanged, except a disposition to run into the fermenting or putrefactive state.

There is no disease, in which emaciation takes place so rapidly as this. The child at first becomes pallid, and the flesh soft and flabby, then the fat on the inner part of the thighs and arms, begin to disappear, and finally so completely is the fat absorbed that the skin hangs in folds, appearing entirely too large.

This disease may be divided into two stages, at least this division will enable us to discribe the disease and treatment much more satisfactorily viz Acute and Chronic. The acute if it assumes the the form of Cholera Morbus, runs its course in a few days. It is in this state, that all the symptoms are more violent, the vomiting is very great, the fever is considerable, the thirst insatiable. It con=tinues from two or three to eight or ten days, and if nothing be done to check the disease, it either ends in death, or degenerates into a dysenteric form, which I call the chronic form. In this the discharges are very frequent, sometimes as often as fifteen or twenty in the twenty four hours; the child either lies perfectly still and inactive or tosses its head and arms about, and making a continued moaning noise, it is regardless of either drink or food, and I think it must be in this state, that the insensibility of the eyes is so great that a fly lighting on the ball does not stimulate the eyelid to motion. This stage sometimes continues from four to six or eight weeks

The Child now has truly a desponding appearance the skin on the forehead appears to be stretched almost tight enough to burst, the cheekbones are ready to start through the skin, the eyes are hollow and sunk, the balls appearing muddy or inflamed, the pupils are either dilated or contracted, but more frequently dilated, sometimes the eye has a very sprightly appearance but frequently it is a deceptive symptom. the nose is sharp, the lips are shrivelled, and the whole system appears to be so emaciated that dissolution would appear to be about taking place; but sometimes the child recovers. The abdomen also becomes distended from flatulence, the feet and in some instances I have seen the face Oedematous. If death takes place it is either from Effusion in the Brain or one of the consequent terminations of inflammation of the Pia mater, mortification or adhesion.

The symptoms of this disease are so peculiar, that it would appear almost impossible to mistake the disease for any other; therefore the diagnosis is very easy. The Prognosis is more difficult. Sometimes we see a child apparently in articulo mortis recover, again cases which did appear to be at all dangerous, to a casual observer have terminated in a few days fatally. When the pulse becomes full and slow, the temperature equalized, irritability calmed, and the discharges changed to a natural colour, or become dark and

tenacious, evincing a restoration of the bilious secretions, we may judge favourably. On the contrary, if the symptoms of the disease are violent and the discharges give the napkin a pink colour or resemble greasy water, or are of a dark flocculent matter, attended with extreme nervous sensi=bility, or an entire extinction of it, the child lying stupid with its eyes half closed, or with occasional convulsions we may expect an unfavourable result. Dr Dewes mentions some symptoms which he says are fatal. The first is "a crystaline eruption upon the chest of an immensity of watery vesicles, of a very minute size". Another symptoms, which attend the last stage of this disease, more common but not less fatal, "is the thrusting of the fingers, nay almost the hand into the back part of the mouth". Another "is the escape of a live worm or worms in the chronic stage of this affection".

In post Mortem examinations, we find no disease state of the brain in recent cases, except congestion, but in the chronic stage, we find effu=sions constituting hydrocephalus. The viscera of the thorax are not diseased, but it is in the viscera of the abdomen that the ravages of the disease may be discovered. The mucous coat of the stomach and small intestines, has dark livid spots over it, the consequence of previous

inflammation. Coagulable lymph is frequently found spread over their surface, and sometimes in detached pieces. The coats are sometimes so thickened, as to reduce the size of the calibre of the intestines considerably. The large intestines are not diseased unless the disease has assumed the dysenteric form. The liver is always found more or less diseased. It is considerably enlarged and its substance is more firm and hard than in health owing to the great engorgement. The structure is not changed. The gallbladder is filled in some instances with dark green bile, in other instances it is of a pale colour. The bowels contain, a thin tenacious mucous occasionally involving lumps of faecal matter.

In the treatment of Cholera Infantum the indications are first to calm the irritability of the stomach, and restore the liver and bowels to their healthy secretions; and secondly, to impart tone to the infeebled system. As the irritability of the stomach is, in my opinion principally owing to a congestion of the portal system, I should recommend bloodletting in the early stages of the disease, provided there were no symptoms to contra-indicate it. Bloodletting will sooner relieve the congestion than any other remedy but it should be aperated with mercurial purges and if necessary a blister may be applied over the epigastric region. Emetics are very highly recommended by high authority in the early stages of this

disease. This practice may be successful, but from the little experience, I have had in this disease, I am inclined to believe to the contrary. If the patient complains of great nausea and distress of the stomach, and is unable to ~~expect~~ the irritating contents, I should have no hesitation, in prescribing a mild Emetic of Ipecac, but in no other circumstances would I use it. Does not an emetic irritate the stomach to produce that action which we call emesis? But it may be said that emesis produces beneficial effects by equalizing the circulation &c. To this, I should say, that as vomiting is one of the most prominent symptoms of the disease, and one which is very troublesome to the patient, we could not calculate to diminish the disease by increasing the most prominent symptom of it, and I would ask, what benefit would artificial vomiting be over that which is produced by the disease itself.

Bloodletting can only be resorted to in the early stage of the disease, but if the fever be not very high, venesection may be dispensed with. Our principle reliance should be placed in the free administration of small doses of Calomel, which should be prescribed as soon as possible. It not only composes the stomach by removing its contents, but it also emulges the liver, and restores the secretions of all the abdominal viscera. Physicians have differed in the quantity of Calomel which should be used

some recommend large doses, others small ones. From my limited experience, I am not able to decide, which I should prefer, but from the opinion of many learned men, I should use Calomel in small doses frequently repeated, say from ½ to 1 grain three or four times daily. Dr Dewee recommends calomel to be used in conjunction with Opium in the proportion of ½ to 1 gr of the former to ⅙ or ⅛ gr of the latter. Many other able Physicians have recommended opium, and it would appear presumptious in me to deny the beneficial influence of it in this disease, but as I consider the disease to be an inflammation of the mucous coat of the stomach, and small intestines, accompanied with great congestion of the liver. I should fear the administration of opium. Calomel should be continued daily until the discharges become more consistent and their colour more natural, evincing a restoration of the healthy secretion of the liver. Many other remedies have been recommended, but as I consider Calomel to be one, in which reliance can be placed I will not take time to enumerate them.

If the extremities become cold, the application of Blisters to them are of very great importance, they tend to equalize the circulation, relax the skin and remove congestions. A blister over the Epigastrium is sometimes of great benefit, in tranquilizing that organ.

The warm bath is of great utility, during the acute stage, when there is great unequality of temper=ature, and if there is much insensibility of the skin it would be advantageous to add some stimulating substances, such as mustard, brandy &c, friction should be used after taking the patient out of the bath.

In the treatment of the Chronic stage of Cholera when it assumes the form of diarrhoea, the antiphlogis=tic plan should not be pursued to the extent as is recommended in the acute state; as the inflammatory symptoms have greatly subsided. Small doses of Calomel combined, with some of the Cutaceous preparations may be used with great advantage, if there be any acidity of the stomach. Alkalies have also been highly recommended, combined with opium. In those cases where the discharges are frequent, I have seen great benefit derived from the following preparation, take Carb: Magnesia and rub it into a thin paste with water the dose of this is one teaspoonfull, to which is to be added one drop of the Tinct of Opium, and one drop of the oil of Anise, for a child of one year of age. This is to be given after each thin and watery discharge

Astringents have also been highly recommended Dr Physick speaks very highly of a saturated decoction of Logwood, in doses of a desert spoonfull every 2 or 3 hrs. The saturated decoction of the root of the Dewberry is a powerful astringent and has been highly recommen=ded in doses of a table spoonfull. Sacch: Saturni has

been administered combined with opium, in the proportion of 1gr of the former, with 1/16 or 1/8 gr of the latter, every two or three hours. Alum has also been used combined with opium. Dr Dewes recommends Spts Terebenth: in this stage of Cholera, he says "with this, we have several times succeeded, where all hope was abandoned. The dose is from five to twenty drops, three or four times a day in sweetened cold water".

To remove Tormina &c injections of melted butter, starch and such like articles, are of great advantage. Dr Hofsack speaks very highly of the first. Anodyne injections should be used to calm the irritability of the system.

The treatment of the enfeebled state, is much more plain than the first. after the secretions are restored, frequently nothing more is required than a proper regard to diet. Sometimes tonics are of great advantage and of these the Sulphate of Quinine appears to be the best. It may be given in doses from 1/8 to 1/2 grain to a child a year old as occasion may require. The infusion of Columbo is also used. The best of all tonics is cool air, and it is this which is so beneficial, in the removal from the heated atmosphere of large cities, Dr Rush says he never lost, but three cases of Cholera, out of many hundred which he sent into the country.

Diet should consist of breast milk, sweetened cow milk, Gum Arabic tea, Balm or Marsh Mallow tea, or burnt bread and water, in the acute stage. In the more

advanced stage. the farinaceous articles should be used, as sago. tapioca, arrowroot, jellies, milk thickened with boiled flour, &c. A little ham or salt fish may be allowed in cases of extreme debility of the stomach and bowels.

In all stages of the disease the child should be completely clothed in flannel.

An Inaugural Dissertation
on
Apoplexy

Submitted to the examination
of
The Provost & Professors
of the
University of Maryland
For the degree of Doctor of Medicine
On the fifth day of April 1830

By

Paul M'Sulivane
Of Dorchester County
Maryland

To

Thomas Woolford M.D.

This dissertation is inscribed as a tribute

of gratitude & friendship

By the Author

Of all the diseases with which the human race is afflicted, there is none perhaps, more violent & sudden in its attack, or more fatal in its result, than that of apoplexy, which in its most violent form, baffles the skill of the most able physicians, & eventually terminates in the life of the patient. It is unnecessary to enter into a minute detail of every hypothetical opinion that has been incubated centuries back, various theories have been advanced & numerous controversys published by the ancient writers, without our more tendency to throw light upon the subject. Individuals who have seen to fall or rather struck down, without any obvious cause, gave rise to numerous speculations, & as there not more examinations were not attended with satisfactory results, they

concluded that they were stricken by some supernatural power. An opinion prevailed at one time, that there was certain malignant stars at particular periods of the year, that produced this disease. Ossification of the arteries was also supposed by a visionary pathologist to be the remote cause of apoplexy & many other opinions I might mention but they would by no means tend to elucidate the subject. I shall now proceed to state some of the more modern & lucid opinions, of those writers whose object it seems was to discover some morbid affection of the brain of those persons who died of this disease, & on this they have I believe, partially succeeded. Some maintain that effusion of blood or serum is always the cause of apoplexy, others contend that enterrupted circulation is the sole cause, & another is that it proceeds from pressure on the brain, & now it is very evident that

are cannot take place well without the other, that of their opinions have been supported by ingenious argument & sound reasoning I admit, but they make the disease depend upon ~~three~~ one cause, when in fact they all contribute to produce it. It is obvious that if the circulation be impeded from congestion in the bloodvessels, from their having been previously debilitated, effusion will be liable to take place, either in the ventricles or substance of the brain, thereby producing pressure, which is commonly the cause of a comatose or apoplectic state. But we have cases on record, which state effusion of serum & extravasation of blood has taken place without an apoplectic fit being the result, but that I can hardly credit. I believe that if the blood vessels of the brain be debilitated by any way, directly or indirectly, such as the use of ardent spirits in a great degree, or by a continual habit of pampering upon high seasoned food, by excessive heat, or by any other debilitating

cause, an accumulation of blood will take place, & if the heart be brought into action by any exciting cause, extravasation will inevitably be the result, which impinging upon the sensorium, partially destroys the nervous influence, consequently producing apoplexy, or hemiplegia, but more generally the former, blows upon the head producing concussion, yet produces the disease, effusion of water is likewise another cause, This circumstance has given rise to warm ~~circumstances~~ controversies, Individuals who have written upon this disease, to make a distinction between apoplexy produced by extravasation of blood & apoplexia from effusion of serum, have divided it into sanguineous & serous, From their finding water in the brain of those persons who ~~have~~ died in a state of debility as they thought, they concluded that this fluid was thrown out in consequence of a diminished action of the of the arterial system, It would therefore appear that the system must be in a state of extreme debility, that the heart & arteries must be reduced in their action, before this effusion of water

could possibly take place. This I do not believe, for no extravasation of serous fluid can be produced that we know of without the intervention of some acute or chronic inflammation, & the effect produced by this inflammation is debility, which they believed to be a constitutional thing & not proceeding from a previous increased action of the heart & arteries. Some authors have thought proper to denominate apoplexy proceeding from this cause, Apoplexia Hydrocephalica. Our learned professor of the practice of physic thinks it a useless & improper term, & that there is no such disease, & I am disposed to adopt his opinion, for if there is water in the brain it comes under the dropsical diseases & is named hydrocephalus, if there is extravasated blood it is true apoplexy. No person ever saw an individual fall down suddenly in an apoplectic fit deprived of sense & motion, with water alone in his ventricles. Some extravasated blood will generally be found, inflammation of the

membranes will also sometimes be seen. Blood & serum is very often found in the brain at the same time, one the result of small ruptured vessels the other the effect of a morbid secretion. Carbonic acid gas will produce apoplexy. There were some experiments made by a writer on this subject, whose name has escaped my memory, but who showed that it acted primarily upon the brain, how it acts in this way I cannot positively divine. If you cause the gas to be inhaled in a concentrated state, you will produce instant death by stopping the action of the heart, but if in a diluted state, you will be able to ascertain what effect it will produce upon the brain, that it acts primarily I do not believe, I cannot perceive that it has any specific action whatever upon the brain. It is a production of his own fertile imagination, founded upon no other

ground than that of theoretical speculation. To account for its acting negatively is no difficult matter, we know that the blood goes to the lungs to lose its carbon, but if it meet with a gas with which carbon itself is intimately combined, it is evident that no combination will take place, & the blood will return to the heart in a ~~state~~ carbonized or impure state, in consequence of which, an accumulation of blood will take place in different parts of the system, After this, the individual who inhaled the carbonic acid gas, be exposed to pure atmospheric air, the heart will recover its tone, & by sending its blood with considerable force to the congested parts, extravasation will be liable to take place, This the only way I believe, by which apoplexy can be produced carbonic acid gas, I have thus far related what I believe to

be the remote ~~approximate~~ causes of this disease, I shall now proceed to state the condition & habit of those persons who are generally predisposed to apoplexy. All individuals of sanguineous temperament short neck & corpulent habit ~~[illegible]~~ ~~[illegible]~~ large head ~~&~~ broad shoulders & short stature are predisposed to apoplexy. Apoplectic predisposition is very often hereditary the malconformation of different parts of the body also is very often hereditary, but independent of this hereditary predisposition from peculiarity of organisation, there may exist a constitutional ~~tendency~~ tendency to the head, the symptoms of which, may materially assist in forming a right judgement on the origin & probable tendency of particular symptoms. Persons who are in the habit of drinking much wine or other spirituous liquors are predisposed to apoplexy, persons who eat much high seasoned are likewise predisposed.

Exciting Causes

The exciting causes of Apoplexy are numerous, such as distention of the stomach by a full meal, violent exercise, severe fits of coughing, stooping any length of time, desperate efforts to evacuate a costive stool, immoderate use of wine, excessive heat. & what is very surprising, extreme cold will excite the disease it generally excites drowsiness. ~~And~~ if it be indulged in ~~it~~ the patient sleeps to wake no more.

Symptoms

Apoplexy like all other diseases is always attended ~~with~~ with premonitory symptoms, which, fortunately for the individuals who are subject to it, enable the physician to apply his remedys with more effect. Perhaps there is no disease which presents a greater variety than this, the usual are as follows.

Giddiness in the head attended with considerable

pain, as if the head were bound around by a tight ligature stupor & disposition to sleep, oppression of the brain, throbbing of the temporal arteries, haemorhage from the nose, this is a favourable symtom, many persons have been saved from a paroxism by this circumstance, dimness of vision sometimes transient blindness & deafness, falling of things lid incoherent expressions & stammering, dragging of the limbs & various other signs which denote the rapid approach of a paroxism, After an individual has one or more of these symtoms, he falls down deprived of sense & motion, He is insensible to the enquiry & solicitations of his friends & the assistance of his attendants, This is the usual mode of attack but it sometimes presents itself in a less violent form. Having experienced considerable pain in his head, he may be affected with sickness of the stomach & vomiting, then

falls down suddenly but recovers immediately, if he be not immediately relieved, by being bled by some one present, or by a haemorhage from his nose or some other part, he will gradually fall into state of insensibility. It may sometimes be confounded with syncope, by individuals who have never seen the disease, but the marks of distinction are very different. A person in a fit of apoplexy generally has a compressed but frequent pulse in the first attack, but afterwards it becomes full & strong, whereas in the other it is scarcely perceptible.

During a paroxism of apoplexy there is stertorous breathing as if the patient were in a deep sleep, dullness & glazing of the eye foaming at the mouth, this is generally considered as a fatal symptom particularly if it be thrown out with considerable violence, the teeth are firmly clenched as if to prevent the administration of any medicines, which however in my opinion

can be dispensed with easily & properly, for they can have little or no effect upon the stomach & bowels during the torpid condition condition of the bowels which a patient labours under in the first stage of the disease. If a person have a person have a violent apoplectic fit attended with some of the most prominent symtoms heretofore laid down, he will rarely ever recover. but even if his life be preserved, it is probable he will be affected with incurable palsy, or consequential imbecility, his memory will partially or totally fail, ~~&c~~ mania will be the result,

Treatment

The treatment during ~~in~~ fit of apoplexy should be prompt & decisive, as soon as a paroxism comes on, & the patient falls down in a comatose state, his cravat should immediately be loosened, & all tight bandages be removed from his body, he should be removed to a well ventilated & cool place

e as soon as possible, you should draw as much blood as you can with safety to the patient. The best way would be to draw blood as soon as the patient manifests symptoms of an approaching paroxism, but generally we are called in after the paroxism has actually come on, We should then proceed to treat the disease as the exigences of the occasion requires, We should draw blood from the arm or any place that is convenient for the ~~patient~~ Physician to take it from. Bleeding from the jugular vein is a practice advocated by some, with great warmth, dividing the temporal artery is adopted also by some & I think with great propriety, For it is sometimes the case, that we cannot get blood to flow from the veins of the arm, we allways then should bleed from the artery or jugular vein. It is the practice of the French to rely principally upon cupping & leeching, But that kind

kind of leche warm will fail in five out six cases, it is a practice that we cannot rely upon, in all cases of apoplexy, we should draw large quantitys of blood promptly, which we should not be able to do by ~~the~~ cupping & leeching, which should never be adopted alone, in the first stage of the disease, if the practitioner wishes to be successful, Emetics have been proscribed in apoplexy particularly if it be excited by an overdistended stomach, This is a practice pernicious in the extreme, I would as soon give high stimulants in an inflammatory fever, as an emetic in apoplexy, it is one of the ignes fatui of the gastric pathologists contrary to reason & commonsense, It is obvious, that if bloodvessels be ruptured in the brain, from an accumulation of blood in them, we would by giving an emetic excite the abdominal muscles & by that means cause the blood to be impelled forward with considerable violence to the brain, thereby producing the

An Inaugural Dissertation

On Tetanus

Respectfully Submitted to the Inspection

Of The

Provost, Faculty, & Trustees

Of The

University of Md.

By Bazelleel M Pumphrey

Md 1830

To H. D. Sellers M.D.

Dear Sir

As a mark of the respect & Esteem, which I have for You, Instilled by the many acts of Kindnesses Manifested to me from You, As a friend & preceptor, I respectfully dedicate to You, As a mark of respect due to Merit, The following dissertation on Tetanus - With due respect I remain Yours

B. W. Dumphery

Tetanus.

This is a disease, in the Class, Dynamics, and Order, Spasmi, of Cullen, it is generally characterized by a Spasmodic rigidity of the whole body, Nosologists and practical writers have distinguished Tetanic Complaints into the several species of Tetanus, Opisthotonos, & Emprosthotonos; Cullen has also in his Nosology, put the Trismus or Locked Jaw of Infants, as a genus distinct from the Tetanus, all this however I judge to be improper, and shall consider them only different degrees of the same disease. Tetanic Complaints, may, from certain causes, be seen in every climate, they occur most frequently in the warmest climates & in the warmest seasons of such climates

These complaints, affect all ages, sexes, temperaments & complexions. The causes from whence they commonly proceed, are cold and moisture applied to the surface of the body while it is warm, & especially the vicissitudes of Heat and Cold." The effects of a low temperature in hot countries, is the first item that ought to be considered in accounting for Tetanus. We know nothing of this disease in cold latitudes, & little of it, except what we learn from the writers on the diseases of Tropical climates, although it is occasionally observed in the middle and southern latitudes of the United States. The high degrees of Heat when this disease is to be noticed, usually induces great prostration from excitement, & the diminished temperature

of Night removes the Indirect debility of the day. This is gradual, though certain under common Cares, but if in this state of indirect prostration, the body becomes suddenly weakened by a checked perspiration, under a low and damp atmosphere, in which the heat is conveyed from the body too rapidly, the Excitability instead of accumulating gradually is diminished, direct is added to indirect debility, and the whole nervous system depressed so long that a reaction of the heart cannot succeed. Every other department of life seems to be injured and greatly impaired & the Muscles of Voluntary Motion alone possess not their natural power, but Irritability morbidly increased. The Excitement of the whole system seems to be transferred to these Muscles, & the act in causing the

disease consists in depriving them of their undue power, & diffusing it equally over the other departments. The experience of the faculty who have been conversant with the two varieties of Tetanus is consonant to this pathology, however imperfectly we may have explained it; and is known to require a different treatment, In Traumatic Tetanus, the condition of the Muscles (which consists in a spastic rigidity) is occasioned by the impression made upon them through the brain & nerves, by a local affection; but such partial injuries are very numerous, & occasion a general disease very different in degree & danger. There are, probably some other causes of this disease; but they are neither distinctly known, nor able ascertained. As I have said this disease attacks the nervous but most frequently the Mary

and robust in preference to those of a weaker & more delicate habit, hence Males more frequently than Females. As the disease arises from different Causes, so of course its accession is different. According to the cause. When from Cold, it commonly comes on in a few days after the application of such Cold; but if it arise from a wound or a lesion of a nerve, it generally does not come on for many days, & sometimes the puncture is nearly healed up, giving neither pain nor uneasiness. It also sometimes comes on suddenly and in a violent degree, but more generally its accession is gradual, In this case it comes on with a sense of stiffness in the back part of the neck, which gradually increasing, renders the mo-

tion of the head difficult & painful.
As the rigidity comes on & increases, there
is commonly at the same time a sense
of uneasiness felt about the root of the
tongue, which by degrees, becomes a diffi-
culty of swallowing, and at length an
entire interruption of it, while the rigid-
ity of the neck goes on increasing, there
arises a pain, often violent at the
lower end of the sternum, & from thence
shooting into the back, when this pain
arises, all the muscles of the neck
particularly those of the back part of
it, are immediately affected with spasm,
pulling the head strongly backwards.
At the same time, the muscles that
pull up the lower jaw which upon
the first approaches of the disease were
affected with some elastic rigidity

are now generally affected with more violent spasms & set the teeth so closely together that they do not admit of the smallest opening. When this state comes on it is called Locked Jaw. Then when the disease has advanced thus far, & the great Extensor Muscles of the Back are chiefly implicated, by which the body is bent backwards in the form of an Arch, resting on the Occiput & Heels, the disease has received the name of Opisthotonos. & again when the Extensors & Flexors on the front part of the body, together with the Abdominal Muscles, are Rigidly Contracted, drawing the body forwards, it is then called Emprosthotonos, some Writers have also made other varieties, as the Lateral, or Pleurosthotonos, this is rather the offspring of the fancy, than the result of accurate observation, In this extreme

period of the disorder. Every Muscle of Voluntary motion becomes affected. The Eyes are fixed in their sockets; the forehead is drawn into furrows; the whole countenance undergoes the most Extraordinary change. The Muscles both of the lower & upper Extremities partake of the general Spasm & stiffness, the Muscles of the Abdomen are strongly Contracted & the belly feels hard & tense as a board, And finally a violent convulsion puts an End to the life of the patient. The sufferings of the patient are almost beyond human Conception, & even in the Ordinary Course of a paroxysm, he would think, were it not that there are occasional remissions, in Common with the Spasms they undergo. The Muscular relaxation, however, is trifling, and the intervals of Ease but Momentary. When the Spasm is General & violent, the pulse is contracted, hurried and Irregular. The Respiration is similar

affected, during a remission they both re-
turn to their ordinary state, Fevrish symp-
toms are rarely met with, even in the Idio-
pathic form of this complaint. With respect
to the Treatment of Tetanic affections, authors
have divided it into Idiopathic & Symptomatic
or Tetanus arising from wounds & that from
heat & cold. It is also much more easily de-
scribed than practiced. However we still
consider it within the reach of Medical Art
When arising from a wound or the lesion of
a nerve Dr Collen says the first step, is to
cut off that part from all communication
with the sensorium. If produced by a splin-
ter or any substance in the wound they
should be removed, as producing irritation
there will aggravate the disease, & further
the removal of Irritation cures the disease
We may also apply a poultice of a warm
Emollient kind. the Medical Treatment
is in allaying Irritation & of tranquilizing

the nervous excitability of the entire system
The first we remove, by purgatives obviating
all derangement of the prima, when occurring
in children, Castor Oil is a very good aperient
When this fails we then use injections. Opium
may be applied in any variety of this disease
when obstinate constipation is removed.
The administration of Opium should be prompt
& in very large doses, & repeated at short inter-
-vals, For the disease will resist doses suf-
-ficiently large, to have destroyed the body in
its healthy state, where it arises from checked
perspiration Bark & wine have succeeded, the
patient should be kept under its influence,
aided by Opium, The Oil of Ambra has been of ser-
-vice when all other remedys failed. Mercury
when given in large doses to produce Ptyalism
is beneficial (when from Cold) it may be combined
also with Opium, The Warm & Cold Bath are
each equally eulogized - The Prussic Acid has
been used in some cases with advantage, Dr Potter
thinks the caustic to the spine has been laid
aside unjustified - Vinis

An inaugural dissertation

on Tetanus

Submitted to the examination of the

Trustees and Medical professors

of the university of Maryland

On the fifth day of April 1830

For degrees of doctor of Medicine

By Mahlon C. Price of Maryland

Introduction

In deciding on a subject for a dissertation much difficu
presented; the great variety of diseases which are
interesting to physicians, have already attracted the
attention; and exhausted the ingenuity of other
Candidates for Medical degrees; and independent of
there productions; all diseases have been treated of
by Medical writers of the greatest note; on whose
description and mode of practice I Could not have
flattered Myself with the hope of making any
improvement; Then in Consequence of its being
a duty imposed upon Candidates for degrees in Medicine
I proceede to make a few Remarks on a disease Calle
or known under the title of Tetanus; altho. I am
Confident this thesis will not be exempt fro
inaccuraces, Still I shall not be discouraged; as I am
in hopes the indulgent Reader will make every
posible allowance

On Tetanus; this very painfull, and to often fatal disease was well known to the ancients and described by them, to be principally the productions of wounds; since their time we find it discribed by a variety of authors, under the appelation of Tetanus, Emprosthotonos, opisthotonos, Pleurosthotonos, names expressive rather of the inflexion of the body, than of any material variety with respect to the disease itself;

Altho this disease, may and does occasionally occur in every climate, yet it appears to be cheifly confined to the more southern latitudes, so much so that it has been supposed by some to be Endemic in those situations; It is said to be common in the west Indies, and it is likewise not uncommon in the southern and middel parts of the united States;

With respect to the influence of heat on the production of this disease, we will speak more fully here after,

This disease is, for the most part; gradual in its attack discovering itself at first by more or less Rigidity of the Muscles of the neck; attended with an uneasy sensation about the Root of the tongue, these sensations exists in some instances for two or three days without any alarming Symptoms; the disease however in other instances comes on more suddenly, In the usual form of the occurance of this disease, the Stiffness of the neck continues to increase, rendering the motion of the head more or less painfull and difficult; The painfull sensation at the Root of the tongue is sometimes very considerably augmented, producing a difficulty in swallowing in a greater or less degree; with the continuation and increase of these Symptoms the patient becomes affected with a pain at the Scrobiculus Cordis, Shooting in many instances towards the back; A nausea and vomiting are frequent Symptoms in the commencement of the disease, particular in such cases as arise from Cold succeeding heat, these

Symtoms are rarly of long continuance, at this period of the disease the muscles on the anterior part of the neck and those which move the lower jaw upwards, begin to be affected, and by degrees becoming more violently contracted; closing the teeth in such a manner, as to render the introduction of any thing solid impracticable this symtom is called locked jaw; The pain at the bottom of the sternum now becomes more frequent and fixed, and is attended with an evident increase of the spasms the muscles of the spine which were hither to unaffected now begin to contract, and bend the body strongly backwards the extensors and flexers of the lower extremity are also now affected, and contracting simultaniously, renders the legs riged, in this situation the patient will spring up, and appear to rest entirely or in a great measure upon his head and heals, altho the extensors of the head and back are generaly most affected, yet the muscles of the anterior part of the trunk and neck are frequently violently contracted; particular the

abdominal; which sometimes becomes so rigid as to
ffard to the touch the sensation of a piece of wood;
n some instances also the muscles on the anterior
part of the body becomes so considerably contracted
s to counteract completely their antagonists, in
such a manner as to preserve the whole body rigidly
extended; It is this form of the disease which is more
properly called Tetanus. In this state of the disease the
muscles of the superior extremity becomes so much affected
s to produce a rigidity of the arms and in some instances
clinging of the fists; These spasms are every where attended
with the most violent pains; the utmost force of spasm
is not however constant, for after subsisting for a minute
two; there is always more or less remission of the muscular
, contraction; though in no instance is it so great
s to admit of the action of the antagonising muscles,
his remission of the contraction is always productive
a remission of the pains; but neither is of long
uration; as the violent contraction and pains are
enewed sometimes every ten or fifteen minutes, and that
ften without any evident exciting cause; in some
nstances however every attempt to motion as the changing

of position, endeavoring to swallow, or even to speak, will give occasion to a renewal of the spasms; the pulse in general is either full and hard, or small quick and irregular; in instances however where the disease has proceeded from cold succeeding to heat; a fever with other marks of inflamatory diathisis are more considerable and is sometimes attended with delerium; the breathing for the most part is short, quick and interrupted, and in some cases the heat of the body is increased, while in others it remains perfectly natural. the blood when drawn rarely exhibets the inflamatory buff; but generaly of a looser texture than usual, and does not coagulate as when natural, is of a less florid, or dark couler and is sometimes covered with dark spots;

deglutition is often entirely obstructed, and in most instances the bowels are obstinately costive; the secretion of urine is also deminished, and what is discharged is very high coulered and deposits much sediment: patients in this disease very rarely becomes delerious to any considerable degree, until towards the close when it proves fatal when every function of the system, mental as well as corporal undergoes the most complete subversion

from the repeated and continued violence of this excruciating, ting, and dreadfull disease. It is perhaps unnecessary to observe here, that in this disease the patient is so far from being able to perform any valantary action, that the influence of the will ver the organs of valantary motion; is completely suspended Where the disease terminates in death it is generally on some lay before the seventh; but its termination in health is frequently protracted for three or four weeks or more, nd is generally very gradual, and without any particular crisis rom the very peculiar and striking symptoms of this disease here is little danger of its being confounded with any other t will therefore be unnecessary to treat of the diagnosis; or this reason, that all the diseases which posess any similarity to Tetanus in their appearance are generally of the same nature, and require nearly similar treatment with respect to those who are most subject to this isease. Dr. Cullen has asserted, that altho it may ttact persons of all ages, yet it appears to attact those t the midle age more frequently than those that are ar advanced, or the younger, the male sex more requently than the female; and the robust and igorus more frequently than the weaker;

The frequency of this disease among the negroes in the west indies has been ascribed by some physicians to a superabundance of iritability which it has been imagined the negroes posess, that the negroes do however posess an accumilated iritability is improbable from the following reasons;

First. the do not suffer more frequently than the whites from the great exposere to a hot Sun, Severe exercise or labour deprivation of Rest &c; nor from the general abuse of what are called the non, naturals;

Secondly. unless we can suppose that increased iritability in the muscles, (properly so called) can exist without a considerable degree of it in the muscular fibres, of the System of blood vessels; how can we account for the notorious infrequency of ~~fever~~ ~~of~~ every kind amongst them that the are much less disposed to fevers particular to that grade called the yellow fever, is granted on all hands; how can this happen if their iritability be preternatural;

And thirdly, because it is highly probable that the would more frequently suffer than the do from wounds, amputations and the variety of accidents to which the are necessarially exposed, did the posess that superabundance of iritability

which appears to be so materially concerned in the production of fever from local injuries; as this appears always to be of a degree of violence proportioned to the constitutional sympathy and this last again in a degree proportional to the iritability existing at the time; these considerations have induced me to relinquish the opinion, with the respect to the superabundant iritability, and I would ascribe the frequent appearance of tetanic amongst the negroes rather to the more frequent exposure to many of its causes, to wit, wounds, burns, heat, cold, fatigue and the like;

Of the predisposing causes; Cold has long been known to posess considerable agency in the production of Tetanus but in what manner it acts is not however decided, It is now generally known to be a negative quality, and of course cannot directly or positively produce any effect though indirectly it is not infrequently productive of very many as well hurtfull as salutary. In the present instance I am inclined to adopt the opinion of Dr. Potter, that as it acts only by producing a state of debility which may

favour the action of the Exciting Causes to be hereafter mentioned that is its mode of operation I infer from, there being no instance on record of the disease being produced from exposure to Cold without the intervention of some more active agent, as fireing, heat, wounds, Stimulants taken internally &c did Cold possess any absolute operation in the production of Tetanus; it Certainly would appear more frequently in winter than Summer; Severe Exercise of labour as the produce Muscular debility do most Certainly predispose to the present disease; hence we find Tetanus occuring more frequently from wounds received in battle, than at any other time; That the do this is also futher proved by the greatest frequency of Cramps in the Muscles of the thighs, legs &c, after the have been previously weakend by long walking, Swimming, or the State of Sleep, and that excessive fatigue, no doubt is the principal Cause of the frequent occurrence of this disease amongst the hard labouring negroes of the west indies and the Southeren parts of the united States &c

It will surprise some perhaps to find the directly opposite of Cold viz. heat enumerated as one of the predisposing causes of this disease, that heat possesses considerable influence in some way or other in the production of this disease has long been observed and that heat does produce debility, and that of the indirect kind; is too incontestible a fact to need any illustration. To these causes may be added excess in venery, want of rest, excess or a deficiency of aliment, and indeed every thing which tends to produce debility; from what has been said it may be infered, that the debility in this instance does exist particularly in the muscles; from their being almost exclusively affected; And I agree with Dr. Potter in believeing this disease consist in an accumilated irritability of the muscles, and a preternatural excitability of the whole system.

Occasional or Exciting causes. there as far as we know are, first wounds of every kind, as well of muscular as tendinous, or nervous parts, and particularly such as are made by gun shot; The distance of time from the

Infliction of the wound to the appearance of the disease is extremely various, it having appeared in some instances in two or three days and in others after several weeks has elapsed and the wound had healed, in cases of the last kind the appearance of this disease when it was not to be expected, has been attributed by Dr. Rush to the retention of acrid particles in the wounded part, The cutting of the umbilical cord with dull instruments is accused of frequently producing that form of the disease called Trismus Nascentium, by the practitioners of warm climates; Burns not unfrequently produce Tetanus Secondly, In complyance with custom I shall here mention cold, as an occasional cause of Tetanus, that the disease has in many instances very sudenly appeared after imprudent exposure to cold is not to be controverted, it is also equally incontrovertable that cold never produces Tetanus by a direct or positive operation; but I would rather ascribe the origen of the disease in these instances to the suden diminution of the excitement and the immediate predisposition

Thereby induced to Convulsive and inordinate action; upon the impression of almost any Stimulus, May not the Muscles in these instances fall into Convulsive or wrong action, from the influence of what Mr hunter has called the Stimulous of imperfection; as Sudden and Copious depletion in Some instances produce Convulsions: It is only on Some such a principal as this; that the Effect from the application, of Cold Can be Explained;

Thirdly, heat is also Supposed by many to be a frequent occasional Cause of Tetanus,

Fourthly, Terror is enumerated by Dr. Rush amongst the Exciting Causes of this disease;

Fifthly. Tetanus is Supposed to be frequently induced in infants, by acrid Matters in the intestines particular by the retained Meconium;

Sixthly. It has been induced by drawing of teeth

Seventhly. It has been in Several instances the Consequence of Eating the Narcotic vegetables particular the hemlock and the Stramonium,

Eighthly. It has been the consequence of the bite of some of our poisonous serpents;

Ninthly. It has been in some instances the effect of parturition

Tenthly. It has sometimes appeared as symptoms of hysteria

Eleventhly. and lastly, as symtoms of bilious fever, gout, and hydrophobia; to these we may also add ardent spirits marsh miasmata, or indeed stimulants of any kind;

A consideration of the effects of most of the above causes will convince us that the prove injurious, in consequence of a stimulant operation unequally determined to certain parts from their greater disposition to receive impression; this unequal determination unquestionably exists in the muscles in the present disease; as we may infer from their being principally affected; having now considered every circumstance essentially pertaining to the history of Tetanus; I shall before I attend to its cure, briefly attempt its pathology, prognosis, and prophilaxis;

In attempting the investigation of the pathology of Tetanus am fully apprised of the difficulty which invelopes the

subject; and of the little assistance to be derived from the present imperfect state of our knowledge with respect to the pathology of muscular affections;

To relinquish an enquiry however on account of its apparent intricacy would be equally unphilosophical and unfriendly to the extension of Science;

In the first place then we may observe, that the disease consists of an uniform spasmodic contraction of the muscles either partial, or general throughout the body which therefore producing the phenomenon of the disease, we shall call its proximate cause; This spasmodic contraction of the muscles is of the kind called by nosologists tonic or fixed in contradistinction to those called clonic spasms. The last alternating with relaxation and constituting what are called convulsions.

An explination of the peculiar modus operandi of the exciting causes, in the production of this disease has long been held as one of the desiderati of medical science; and although the physicians of the present day have in a remarkable manner discovered an attatchment

nd fondness for the pathological enquiry and Speculations,
et there are very few who have attempted an explination
f this curious problem: It is likely that a more accurate
ttention to diseases will discover that the mode of action
the same let it be where it will viz irregular. wrong,
convulsive action; and we would be led to explain
the difference of the disease rather upon some circumstance
r property peculiar to the part affected, than upon
supposition of there being absolutely any Specific
ariety of the same diseased action; as appearing in
ifferent parts as bone, Muscle, artery, &c
e this as it may, we well know that the same Stimuli
which produces Tetanus, do very frequently produce
onvulsive or inordinate actions of the arteries, or fever;
hen the are aided by arterial vibratility or iritability,
nd I cannot think that it is going to far to suppose
hat the same causes applyed to the body labouring
nder increased muscular iritability, or predisposition,
ill produce irregular, inordinate, or convulsive actions

In the Muscles; and in fact the disease in question; this we are farther warranted in believing, Since in each instance these Stimuli act upon matter of the Same nature viz. Muscular fibres;

I am well aware that it may be asked, how I explain the manner in which these Causes, Comes to act particularly on the Muscles; and this I would explain upon their possessing at the time a greater Susceptibility of impression than any other part of the body;

With respect to the application of these exciting Causes as whether the Must be locally applied to produce a disease in a particular part; I Cannot determine; I am however inclined to believe that most hurtfull agents produce their effects by a general opperation on the whole System; and that the exclusive of Either arteries Nerves, or Muscles is to be explained upon the existance of increased irritability;

In forming a prognosis of Tetanus we are to be guided first by the Causes which produced it, Secondly, by the violence with which it attacts; Thirdly, by the length

of time which it has existed; and Fourthly, and lastly by the Situation of the patient at the time present,
First, those Cases which arise from wounds are generally more fatal: than those from any other Cause;
Second, the disease is generally fatal in proportion to the Rapidity of its attacts; Third, those Cases are favourable when the disease is protracted beyond the fifth day, altho there are some instances of its fatality after the tenth; Fourth Cold extremities and Clammy moist sweat are generally supposed to portend death; Where as a fever with a white tongue and a plentifull discharge of urine are thought to foretell a favourable issue;
Prophylaxis; there are very few diseases per haps So Certainly prevented in their forming State as Tetanus and to this period of the disease we should be particularly attentive, as most of the Causes productive of Tetanus are more frequently productive of other diseases than of it; So we find little said, or indeed little Could be said with respect to the use of any prophylactic Remedies

Betwen the applications of the exciting causes and the
beginning of the disease, as most of these are generally so
very obscure in their operations, as to render this last,
insensible to us, until the are about to induce the disease
This obscurity however very happily for mankind does
not exist, with respect to one of the most frequent
and dangerous causes of this disease; viz. wounds, however
it may be explained, it is the undeniable result of
experience that this disease is most frequently the
consequence of such wounds as have healed, without
the intervention of much inflamation; and it is
equally true on the other hand; that a considerable
inflamation in them either natural or artificial, is
one of the surest preventatives of Tetanus, in such wounds
therefore as we have any reason to suspect will produce
tetanic affections; we should resort to such measures
as will excite inflamation and superation; as we
can never act with propriety in doing any thing
with the intention of preventing Tetanus from its other
causes before we perceive some of its symptoms we are

To be particularly attentive to those which may be called the percursors of the disease, viz, pain and Stiffness of the Neck and jaws, a disagreeable sensation at the root of the tongue; and Starting from Sleep; whenever these symptoms occur the disease may be almost uniformly prevented, by the use of opium and other Stimulants as bark, wine, &c, and by the application of acrid Stimulants, or what I would prefer, Caustics to the wounded part, when it proceeds from that Cause;

Having Said as much with Respect to the prevention as Experience and Reasoning on the Subject will justify I proceede to the treatment of the disease after its Complete formation.

Cures the indication of Cure are first, to lessen or abstract the irregular and diseased Excitment of the Muscles by first, Bloodletting, Second, Emetics, and third, by purgatives Secondly, after Sufficient depletion to Remove or overcome the diseased action by Tonic Remidies, these are first opium, Second, bark, third, wine, fourth, oil of amber, fifth, Cold and warm bath, Sixth

Mercury, of each of which I shall speak in the order
n which the are mentioned; and first of Bloodleting
The use of Evacuations in Spasmodic affections is by
no means of modern invention, as we find them
mentioned by several of the ancients writers as being
essentially necessary in all cases of Spasm not immedi
tely, depending on inanition; although most of the
modern practitioners have precluded the employme
of bloodleting in Tetanus; there are never the less some
who have used it in particular instances, and there are
not wanting facts to Establish its propriety; had the
remedy nothing from Experience to recommend it
it would yet be worthy of a trial, as being manifest
ly harmless in diseases of this kind; and there are very
few as far as I know who accuses it of being injurious
I conceive the propriety of bloodleting as a remedy in this
disease proved by the following circumstances.
First. the pulse is frequently very full and hard

necessary of such of which I think I have in the main
which the are chiefly; the practice of bleeding
in case of inflammatory in Pleurisy effection is by
venous of bracchia incisions, as we give them
authority by learned of the ancient writers as being
particularly necessary in all cases of pleurisy and inflammatory
of depending on inflammation; bleeding about of the
arm particularly increases their frequency & the employment
bleeding in delirium; there are reasons the life alone
to have recourse for practicing in delirium, and thus are
a necessity place to establish the practicability; but the
usually nothing plain confidence to recommend it
would yet be worthy of a trial as being harmless
in diseases of this kind; and there are very
as yet no I have little account of being injurious
consider the propriety of bleeding as a remedy in this
case proved by the following Gentlemen
the fault is frequently [illegible] fault are have

by the Relief, which it affords in other instances of Spasms
s in the Spasmodic Contraction of the bowels in Colic,
nd in Spasms attendant on Hysteria; third, by its
known effect in producing general Relaxation,
s is exemplified in Syncope, and in facilitating
he Reduction of luxations and fractures.
by the blood bearing the appearance of athilogistic
liatheris, I therefore think it should be employed in
he first instance in all Cases where there was not
o much arterial debility as to forbid it.
Emetics, is proper in all Cases where the disease
has arisen from Narcotics being taken into the
Stomach, likewise Emetics acts as a Sedative
and equalizes the Excitement.
Purgatives, in this disease are generally highly
Indicated, as the patient is generally Costive,
Dr. Buchler, Conceives the disease most generally
Excited into action in Consequence of a derangement

the intestinal Canall, therefore we should resort to the most active Cathartics and likewise Injections opium & this remedy has been more generally used and extolled in Tetanus than any other, So much so indeed that very many have depended entirely on it for a cure although it has been so universally recommended, there are many proffs of its inefficacy; To obtain the greatest benefit from this remedy we might very advantagiously use bloodletting previously to its exhibition; in this manner by lessening the excitement we enable the opium the more easily to institute its own action; It should be given freely, and repeated as often as the violence of the disease might require; perhaps from the known transitory stimulant effects of this medicine we would derive more benefit from it when Combined with some more durable Stimulans, and give it in conjunction with madara wine, as Dr. Buchler

as recommended, opium has been also used in the
rm of plasters Either to the jaws or feet, to advantage
addition to there methods we may also Ehibit it very
uantagiously in the form of Enema, with this difference
ever that in this way it is to be used in a double
perhaps in a greater quantity, In Cases of wounds
at probably may produce Tetanus, Dr. Baker
commends the use of opium in such quantities
will keep the System Completely under its influence
long as their is any danger;
ne, as a powerfull diffusible and somewhat durable Stimulus
ay be properly used and in Considerable quantities;
Wosack, relates several Cases, whe he administered wine
a large amount in Tetanus, unaided by any other Medicine
d obtained the happyest results.
il of amber; this medicine has been highly recommended
Some practitioners, and Supposed to have its action
incipally upon the Muscular System; Dr. Potter, advises
is article to be given in large doses from ʒss. to ʒi.
old Bath; this remidy has been highly Spoken of
especially by Dr Currie, he Says it allays the violent

action of the heart and arteries, and soothes the System of sensation, It reduces the pulse in frequency moderates and Equalises vascular action, relaxes the muscular fibre, and removes rigidity; likewise disembarasses the organs of respiration; yet I think it should be cautiously employed in cases wher there is much debility.

Warm Bath; this remedy has been much extolled by some practitioners, but I think it should never be employed except in cases of very weak action, and should be succeeded by friction with dry flannel.

Mercury; When we consider the operation of this remedy; as a very general and powerfule Stimulant acting particularly however on the arterial and lymphatic System; Its propriety in that State of this disease in which incitants are to be used will be at once admited; although the use of Mercury in the present disease has been strongly condemned by Some; yet there are not wanting facts to prove its utility, and have have only to lament that it is so often difficult to excite a Salivation; that the disease

frequently terminates before this effect can be produced I would therefore in every instance have immediate recourse to mercury in conjunction with other remedies to be introduced by the mouth or skin in such quantities as to effect the gums as speedily as possible; and if it proceeds from a wound apply warm cataplasms to the part.

Might not pucking with corrosive sublimate be of service, this mode of exhibiting this medicine has been found very speedy in producing ptyalism

An Inaugural Dissertation,

On Acute Gastritis.

Submitted to the examination,

of the Regents, and Medical Professors,

of the University of Maryland.

For the Degree of Doctor of Medicine,

By John Gunby.

March 20th 1830

To Nathaniel R. Smith, M.D.,

whose superior Genius,

and highly cultivated understanding,

is equaled only, by

His exemplary moral character.

This Dissertation is,

Respectfully dedicated

By his friend and
Humble Servant
John Gunby.

Acute Gastritis.

When we enquire into the relative situation and functions, of the Stomach, its numerous train of sympathies, and consequently, its liability to diseases both idiopathic, and symptomatic; we cannot fail to be convinced of the magnitude of its importance in the animal economy; and the Practitioner of Medicine who should fail to give it that investigation, which his Profession imperiously demands of him, is justly chargeable with gross neglect, and unworthy of the well earned reputation of his more indefatagable Brethren, and the confidence of his patient.

In entering upon a dessertation on the diseases of this biscus, it will not accord with my present design, to take an extensive view of the subject, were my capacity commensurate with their importance, and should consider, the brief remarks I have to make totally inexcusable, if time and circumstance would permit a full discussion of them.

In commencing this subject I have thought it necessary to mention the function of the Stomach in health, a

knowledge of which frequently enables, or at least assists us, in detecting the disease. The anatomy I have deemed altogether unnecessary to insert, I therefore shall proceed to its functions. The general points of which, almost all Physiologists agree: namely, that it is a receptacle for the food, after having undergone the process of mastication; for the purpose of undergoing by far the more important change necessary for the nutrition and growth of the body. The manner of accomplishing this however, has given rise to numerous opinions, It was believed by the Fathers of our science that the food was subjected to a putrefactive process, which they expressed, by the term concoction, and which I think is now seen to be entirely hypothetical. And more recently, that the Stomach acted mechanically, by a forcible contraction of its muscular fibres, its walls were made to approximate to each other, and by a species of trituration, it effected a minute division of its contents. But when we consider the

weakness, of the muscular fibres of the Stomach, and the membranous nature of its coats, it will appear, that the general action is slow, regular, and by no means a forcible contraction; not an apparatus for triturating the food, but mearly giving motion to its contents. The next opinion, and the last, that will claim my attention at present is, that the food is disolved by a fluid which is a peculiar secretion of this organ (namely the Gastric Juice). And is beleived flows from the extreme arteries of the villous coat in general and partly from the mucous cryptae and ducts when pure it is a pelucid mucilaginous liquor, a little salt and brackish to the taste, like most other secretions having the power of retarding putrifaction and disolving the food. The Gastric Juice now acting upon the fluid mass, (after mastigation and mixing with the saliva), will disolve the digestable, and entering into combination with it, will produce a new fluid,

called chyme. In taking a view then of the healthy actions of this organ, it would seem, that the food is sent down into the oesophagus by a succession of actions, preceeded by a perfect relaxation, and when the food arrives at the superior orifice of the Stomach by the same relaxation, preceeding the contraction, the muscular fibres of the upper part of the Stomach yield, and receive the food compressed by the oesophagus. And when the process of digestion has been performed, and the Stomach being stimulated by its fulness; and more still, by a peculiar irritation of the food, to which it is natural to suppose it is adapted, the muscular coat is brought into action, and the contents delivered into the duodenum.

Having considered this part of my subject in a very brief manner, I proceed to the consideration of the disease, which has been divided into an inflamation of the acute and chronic kind; and to the

former of these I shall principally confine my remarks. And shall consider in order its Causes, Symptoms, Treatment, and Terminations.

In considering the causes of Gastritis it is proper first to remark; that those are more predisposed to the disease, who are of a sanguine and plethoric habit, and indulge freely in the use of fermented liquors. And those also who bring into life a peculiar predisposition to the disease, and are liable to have it excited from the slightest causes.

The causes of this disease I propose to divide into those that are external and those that are internal. Among the external are blows received on the region of the Stomach, or wounds in the stomach, or neighbouring parts. The pressure of the Ensiform Cartilage, when it is dislocated or broken so that it presses on the Stomach, may excite this disease. The sudden application of Cold to the surface

by diminishing perspiration too suddenly, and by exposure to a low damp atmosphere. Also by getting the feet wet. Among the internal may be enumerated cold water swallowed, while the body is in a state of free perspiration; likewise by taking in food of an improper nature; by potations of Spirituous Liquors; by over distention of the Stomach by food and drink; by suppression of habitual discharges; and by repelled Exanthemata and Gout. It is also produced by inflamation of the Liver, and other neighbouring viscera, extending to the Stomach. From acrid poisons, and mineral acids, and by swallowing in large quantities, Corosive sublimate, Arsenic, Tartar Emetic, and acetate of Lead.

The symptoms of Gastritis, are far from being complicated, and I think may readily be distinguished from inflamation of the neighbouring viscera. The pain in the Stomach is extremely acute, lancinateing, and

accompanied with a sense of burning heat. It is not always confined to the region of this organ, but sometimes extends as low as the false ribs, and often shoots to the back. Frequent vometing particularly on swallowing fluids. The pain is generally increased, by receiving any thing into the Stomach, and always by the slightest external pressure. Attended with constipation and Fever, with a small hard, frequent, and depressed pulse; sometimes intermitting. And a fact that should claim our particular attention, mentioned by Professor Potter, and not noticed by any writer upon this subject, that the Pulse when the inner coats of the Stomach are affected is low and depressed; but when the inflamation travels to the external or Pentoneal coat it gradually rises, and visa versa; a circumstance which should assist us very much in discriminateing as to the precise seat of the disease. There is also

urgent desire for cold drink, and after receiving it into the Stomach, the pain often seems for a time to abate: the fluid however is soon rejected and the Patient finds any relief obtained from drink=ing deceitful and transitory. The depression of strength in this disease, is more sudden and general, than in any other inflamation; Syncope, sometimes occurs, with a sensation of anxiety, and anguish, refered to the precordia. To distinguish between this disease and spasm and flatulent pains of this organ, we shall perceive in the latter the pulse is generally natural or nearly so: nor are they accompanied, with the sudden sinking of strength that attends Gastretis, Vomiting is very rarely so constant, nor is it so often excited by ingesta. Hiccup is also a less constant symptom; Nor is pain increased so sensably on receiving any thing into the Stomach. Nor is there any pain on pressure, which I think is one

of the best diagnosticks of Gastritis. In cramp the skin is cool and moist, in Gastritis it is hot and dry. There is however another disease, between which it is more difficult to distinguish; I allude to an inflamation in the epigastric muscels; and in order to give a better illustration; I propose to insert the following extract from an enlightened author. "The pain as in Gastritis indeed is increased on pressure; but it is also increased, and in a greater degree, by the motions in which the epigastric muscels are called into action, which is not the case in Gastritis. The state of pulse in the former is verry different. If affected at all instead of being small and feeble as in Gastritis, it is strong as in most other Phlegmasia. Besides there is little or no tendency to vomet in this case, and some degree of swelling of the muscels may be frequently obseaveed: this symptom however is not constant, and there is often some fulness about the Stomach in Gastritis."

Having thus far given some of the most important of the symptoms and dignostics of this disease I proceed in the next place to the treatment; which nearly resolves itself into that great antagonist to all inflamations; Bloodletting; And must be carried to greater extent in this form of inflamation than perhaps any other. It is also to be resorted to under quite different circumstances; for in most other inflamations, we generally find a strong and hard pulse, and then our object must be, to bleed untill we reduce it. But in Gastritis, we will find a low and depressed pulse, which after bleeding will rise, and it is only as this effect is produced that it gives relief, And so far from only letting blood when the pulse is full and strong the smaller and weaker it is, provided the disease is idiopathic, copious and early bloodletting becomes the more necessary. As soon therefore as the symptoms present themselves, recourse must be had to this remedy, and

if they do not speedily yield, it must be carried to as great an extent as the peculiar habit of the Patient will permit. It frequently happens, that the sym=ptoms of Gastritis entirely disappear, after a large quantity of Blood has been suddenly taken away: it will be necessary then, to be prepared for a recurrence of the disease; which to a greater or less extent generally happens: a repetition of Bloodletting then, should claim our immediate attention. And the less remission the symptoms suffer, after the first Bloodletting, it must be rep=eated the oftener, and to the greater extent. I would suggest as a general rule for the application of this remedy in this case, that the blood should be drawn through a small orifice, a small quantity at a time, and frequently repeated. Having said thus much in approbation of Blood letting, I shall proceed to mention some other remedies, which are only to be considered as auxiliary. As it would

be improper in this stage of the disease, in consequence of the extreme irritability of the Stomach to give medicines by the mouth, we should solicit evacuations from the Bowels by Enema's; which while they expel the contents of the lower Bowels, tend by sympathy to increase the periastaltic motion of the Alimentary canal. If however in consequence of peculiar circumstances, it should be necessary, to give cathartics, I would recommend to employ Calomel in large doses; for in this case it would be reasonable to infer, that in consequence of the specific gravity of this Medicine all, would not be expelled by vomiting. All saline and Antimonial Medicines, should be particularly avoided, as they would serve only to increase the disease. The drinks should be tepid, and of a mucilaginous nature. After general bleeding, Topical bleeding, by means of Leaches over the Stomach or scarafying and cupping may be adopted. And after

the hardness of the Pulse, has been removed, by the plan proposed, Blisters may next be applyed, and to be of service should be made large, so as to cover a consider-able extent over the region of the Stomach: and the cure may be assisted by fomentations over the Abdomen. In this stage of this disease, the warm Bath and Pedeluvia may be used to great advantage; particular-ly if the skin is hot and dry. As mild apperients the sweet oil and olive oil has been employed with great benefit. After the violence of pain and frequen-cy of vomiting, are somewhat abated, we may then administer anodyne Enemas.

When this disease has been excited by takeing into the Stomach acrid Poisons, it should be our object to ascertain its nature, and employ its antidote as soon as possible. If Corosive Sublimate, or Arsenic, has been swallowed, we should administer Albumen, When caused by Tartar Emetic, we should give a decoction of Cinchona

When by Acetate of Lead, we should give the Sulphate of Magnesia. At the same time cause the Patient to take frequent and small draughts of some mild diluent drink, such as Chicken Broth, Linseed tea Barley water, in which may be dissolved a small portion of Gum arrabic, Adapting our treatment in such cases in conformity to the principles, and according to symptoms, as from other causes.

When our remedies have had their desired effect this disease will terminate in Resolution, The pulse becomeing more soft and full, about the seventh day, and diminished in frequency; the pain gradually ceasing the Patient is restored to perfect health. But unfortunately this is not the happy termination of every case. In some instances it will terminate in suppuration, and may be known by the symptoms altho moderate, will remain, for a considerable time, and by a remission of the pain occurring whilst their

remains a sense of weight and anxiety. And on the formation of an abscess; hectic fever and nights sweats supervene, and these at length prove fatal, unless the puss is thrown up by vomiting and the ulcer heals.

When the violence of the symptoms have not yielded to proper remedies early in the disease, and when there occurs a sudden cessation of pain; the pulse continueing its frequency, but becomeing weaker, with delerium and other marks of debility ensueing; we may reasonably conclude the disease has terminated in Gangrene, and consequently in Mortification.

An

Inaugural Dissertation

on

Cynanche Trachealis

Submitted to the examination

of the

Provost, Regents, and

Professors of the

University of Maryland

for the degree of

Doctor of Medicine

by

John A. Sedwick

of

Calvert County Maryland

1830

Cynanche Trachealis

This disease has usually been divided into two varieties, the Inflammatory and Spasmodic, but it seems doubtful whether the last variety has ever existed, although it has many able advocates, but the most enlightened of the profession appear now to be agreed as to its pathology and the general plan of treatment to be pursued, viewing it alone as an inflammatory disease. I am supported in these remarks by the illustrious Professor of the Practice of Physic, in this Institution. Adopting therefore the opinion of its inflammatory nature, I shall commence with its causes, symptoms, treatment &c.

It is said like most other inflammatory affections to be produced by cold, it is therefore most prevalent in winter and spring, it occurs however at all seasons when there are vicissitudes of temperature, and it is a very frequent disease in August and September, when the days are warm and the nights cool, it is sometimes

produced by metastasis of Gout & Rheumatism
It frequently follows close upon Catarrh, Measles,
hooping cough, and any other disease that has
debilitated the powers of the lungs, for as has
been observed that whatever tends to weaken or
produce any degree of irritation in the lungs so
as to occasion a preternatural secretion into that
organ may be considered as a predisposing
cause of croup. Children who have once had
an attack of croup are liable to have it renew-
ed on the application of very slight causes,
a common Catarrh, will in such constitutions
be often attended by croupy symptoms until
the thirteenth or fourteenth year of life.
There appears to be in some families a hereditary
predisposition to this disease, and in them
it is always more easily excited, this pre-
disposition may be sometimes outgrown,
and it may also be destroyed by the occurrence
of some diseases, as Measles &c.
It has been said by some that this disease is
peculiar to children, scarcely if ever occurring

in adults but though it be admitted that children are more liable to it, yet there are sufficient ~~instances~~ of instances to warrant us in the opinion that it attacks adults also, and in them is always highly inflammatory.

The disease sometimes comes on quite insidiously, commencing with catarrhal symptoms, the inflammation proceeding from the Schneiderian membrane to the Trachea. In other cases it is ushered in by a chill and then is more violent, requiring more prompt and energetic treatment, for its cure. It consists of various degrees of action from a mere local affection, attended with little, if any general fever, to one of a highly acute kind, attended with fever very inflammatory. Where it is a mere local affection without the general system being much involved, an Emetic pill of itself frequently

arrest it, but when very inflammatory the whole force of the antiphlogistic plan is required for its removal. It has been said that the disease consists in an inflammation of the mucous membrane of the Trachea, but the inflammation is not confined to the Trachea alone, it may involve the neighbouring parts — it may even extend through the ramifications of the Bronchia, and it may involve the lungs also producing Catarrhus suffocativus or Pneumonia. This disease may attack with, or without a chill as was before stated, but in its most ordinary form it is attended with fever of Synochal type, tense pulse, a peculiar sonorous cough, by which alone it may be frequently recognized, difficulty of breathing, dry skin, restlessness and other symptoms of inflammatory fever pain &c.

It is sometimes very rapid in its progress and will

frequently when left to itself terminate fatally in twenty four or forty eight hours. Death is produced in two ways viz from suffocation and the extent of the inflammation.

Dr Cullen seems to think that suffocation is produced by a spasm of the muscles of the glottis, though he says it may sometimes depend upon a quantity of matter filling the bronchia,

It is probable that suffocation is always produced in the manner last mentioned, and that it never is by a spasm of the muscles.

Professor Potter's opinion is that a complete closure of the Rima can never be produced by them, the inflammation says the Professor " sometimes extends from the lining of the trachea, to the muscles surrounding the glottis, and in other cases it commences in those muscles and travels downwards, but the situation and office of all muscles is such that they ~~never~~ can close the

passage into the windpipe. When in a state of inflammation an irritating cause acts upon the muscles, great pain and tension are exerted, but they are so completely antagonized that they cannot close the passage." It is probable then that suffocation is always produced by the membranous like production which is generally found lining the trachea in fatal cases of the disease.

This membrane is now I believe generally understood to be a secretion from the inflamed vessels. It has been seen extending from the trachea throughout the ramification of the bronchia, it is very tenacious and very analogous to the fibrine of the blood. This membrane is not formed in every case of the disease — the action of the vessels may be too high and also too low for it. Secretion appears to take place only within a certain range of action, and I believe that in very mild and in very inflammatory cases of the disease

no membrane is formed, and in many dissections we find the vessels injected with red blood only.

The disease may kill from the inflammation involving other parts, from its extending to the lungs, and I think it has been said it may extend to the brain.

As the principal indication in the treatment of this disease is to subdue inflammation, so the first and most important remedy that presents itself to the notice of the Physician is general bloodletting. Unless we see the patient very early in the disease this should be the first remedy employed and it is seldom that the patient is seen so early that it can be safely dispensed with, even in the forming stage it would in general be the safest practice to employ blood letting, though it may not be necessary to carry it to the same extent

as when the disease is fully developed. In some very mild cases when there is little or no fever, or in the very commencement before the general system is much implicated, for sometimes it appears to be entirely local in the first instance, the lancet might not probably be very imperiously demanded, and the cure might frequently be effected by an Emetic and other remedies but even in these instances I should deem it the safer plan to bleed, particularly if the patient should be robust and plethoric, and there was much difficulty of breathing.

As the inflammation is seated in a part very essential to life and the danger generally urgent, we should be very prompt in our remediate measures. With regard to the quantity of blood to be drawn, it is difficult, nay impossible to lay down any certain and invariable rule, for it must be

varied according to the age of the patient, his habit, the severity of the symptoms, and the length of time they have lasted. Perhaps in very inflammatory cases it would be a good rule to bleed in the first instance, ad deliquium animi, as by this means a more sudden and powerful impression would be made upon the disease, and with regard to the repetition of the remedy, the only rule is, the subsidence of the urgent symptoms. Not unfrequently after one full bleeding all the dangerous symptoms will subside, and the patient, who before seemed every moment about to suffocate, will now breathe quite easy and appear nearly restored to health. Although the symptoms should thus suddenly abate, however we are by no means to consider the patient as entirely out of danger, for after all these propitious appearances they may sometimes return with their former violence. We should therefore

in the management of this disease be always on the alert, and be ready to make use of our remedies the moment they are indicated. Objections have been made to the free use of the lancet in children, but the blood drawn in this disease is generally sizy as in other inflammatory affections.

Emetics have been held in high repute by most writers upon this disease, and they seem to be particularly beneficial, besides the benifit arising from the evacuation of offensive matters from the stomach, they are very useful in facilitating expectoration which you know here is of the greatest importance. They contribute very powerfully also to the removal of inflammation by diminishing the action of the heart and arteries, and by their tendency to restore to the extreme vessels their natural functions.

In very inflammatory cases their

use should be always preceded by the lancet, then use seems to be particularly adapted to the incipient stage of the disease, or to very mild cases they will sometimes of themselves effect a cure. There is some preference in the choice of Emetics those ought to be chosen which produce most relaxation and have the greatest influence upon the heart's action — for these reasons the Tartrate of Antimony & Potash is preferable to all others, when given in combination with Calomel according to Professor Potter its relaxing effects are much more powerful. It is all important that full vomiting should be produced. The Stomach is so insensible sometimes that the ordinary Emetics even in very large doses fail to operate — Under such circumstances the Corrosive Sublimate has been recommended as a dernier

resort, and in some cases has been used with great advantage. The repetition of Emetics in Cynanche Tracheali is to be regulated by the circumstances of the case, no definite directions can be given.

Calomel is a medicine which is almost indispensable in the treatment of this disease. It is recommended very highly by some European writers, particularly Drs Anderson and Hamilton of Edinburgh, the latter of these gentlemen has probably used it to greater extent than any other writer and as he says with general success. In our own country it is also highly thought of Dr Rush used it freely in combination with senega.

Dr Rush also placed great confidence in this remedy, in that species of Croup which he called the humid, Dr Stearns of Albany is an advocate for very large doses of Calomel in the very commencement of the disease

he gave from 15 to 20 gr to a child from 2 to 5 years old at once, it generally produced copious vomiting and at the same Cathartic; the relaxation produced by large doses of Calomel is great & it is probable in this way it does most good. Dr Rush supposed that it acted by increasing the secretion of mucous in the fauces, oesophagus, stomach and bowels, and thereby lessening the secretion of it in the trachea. There is not much to be feared from salivation in the free use of Calomel.

After sufficient bloodletting the best practice is to give Calomel & Tartar Emetic in combination till full vomiting is produced and afterwards to continue the Calomel in considerable doses in conjunction with other remedies that may be indicated untill all danger shall have passed away.

Cathartics may be of some use but no reliance can be placed upon them.

Blisters seem to be of doubtful application they might be used when it was a more local affection. In inflammatory cases in the first stage they would

pernicious, if they should be used at all, the inflammatory symptoms should be nearly subdued. The warm bath has been recommended, it appears to be improper in the first stage before inflammatory action is subdued, but in the second stage it may be very beneficial. The Cold bath has of late been mentioned upon by Dr Harden of St Petersburg and is stated with success. The Seneka has been highly recommended in this disease but it appears too stimulating for the first or inflammatory stage, after this has been subdued and there is a dry hoarse cough, dry skin and oppressed respiration, it would be very useful, and also in cases where it appeared to be a mere local affection. — This together with many other remedies that have been proposed are to be looked upon as mere auxiliaries.

The Lancet, tartarized antimony, and Calomel, are the principal remedies that are required, and perhaps by their judicious application nearly every case might be cured, it is inflammation which is the great antagonist we have to contend with & it is by these means only that we can subdue it.

Tracheotomy has been advised as a last resort in this disease, but it has now I believe been abandoned by nearly every physician.

— Finis —

An Inaugural Dissertation

on

Cynanche Trachealis

Submitted to the Trustees and Medical Faculty of the University of Maryland on the 5th of April 1830 for the degree of Doctor of Medicine

by

Wm. S. Williams

of Maryland

To the examination of the trustees, & Medical Faculty of the University of Maryland, this hasty production of a few days reflection is with diffidence respectfully submitted

Wm. S. Williams

Cynanche Trachealis.

This is a disease of a highly inflamatory a nature, commencing in the mucous membrane of the Trachea, larynx, & extending in many instances to the minute bronchial ramifications, & producing a peculiar secretion, which assumes a membranous form lining the trachea, & not unfrequently the whole bronchial surface, the largest parts of the tube being always first affected. This effusion when subjected to chemical analysis appears to consist chiefly of coagulable lymph, in combination with that peculiar substance of the blood called fibrin; from the nature of which the membrane like appearance can readily be accounted for " by what means says Dr Good the mucous secrement,

throw forth this peculiar effusion on this peculiar occasion we know not." I think however it may be accounted for. The inflamation in croup is certainly of a very singular nature, were it like that usually affecting the mucous surfaces of these parts we should have the same kind of membranous substance resulting from catarrhal inflamation every day. A common cold extending to the trachea or bronchea would most probably terminate in this sort of effusion. The material difference in the nature of this affection cannot I conceive be the result of a higher degree of inflamation, nor in a peculiar mode of action in the same system of vessels, whose office it is to perform similar secretions; their structure & modes of action must be the same & when affected by disease, must give similar results, differing only in the degree of inflamatory action, &

never terminate in secretions so dissimilar, as those met with in croup & common inflamations of these parts. Will not this difficulty be considerably removed by locating the morbid actions constituting them in different structures? that of catarrh having its seat in the mucous follicles, & glands, & the croup in an inflamatory affection of the exhalent arteries opening upon the mucous surface? This hypothesis I think is fortified by the analogy this exudation bears to that deposition from inflamations of other internal membranes, first described by Hunter. Croup has been divided by some into two species; viz Idiopathic when the disease is primarily and extensively seated in the bronchia, & trachea, & Symptomatic when it appears as the consequence of some previous disease, such as measles, scarlatina, or Cynanche maligna: Cynanche trachealis is certainly always an original disease & can

not I suppose be produced by the irregularities of any other disease. The distinction into inflamatory & spasmodic is in my opinion very objectionable; as it might lead practioners in many instances into a very injudicious mode of treatment. It seems to me extremely doubtful if we admit such a spasmodic disease to exist, that it can never be the cause of death even granting for a moment that the glottis can be accurately closed by the action of the muscles proper to it. Is it not impossible for a spasm in any part of the body to be maintained during the sinking powers of the system, which must inevitably take place as soon as the spasmodic action impedes the process of respiration? An approximation to death from such a cause must, I conceive, be one of the best antispasmodics; this convulsive action must yield before death takes place, consequently must fall short of producing so unfavourable a result.. The croup seldom attacks infants till after they are weaned, after this period, "says Dr Cullen the younger they are, the

more they are liable to it; the frequency of it becomes less as children become more advanced. There are no instances, says he, of this disease affecting persons above 12 years of age. this however does not agree with the experience of other physicians; I have myself witnessed a case of this description, which was violent, & cured only by the energetic use of the lancet calomel, & epispastics, the patient was for a long time after subject to slight attacks from imprudent exposure to cold. The application of cold seems to be the general cause which produces it, hence it occurs more frequently in the winter, & spring seasons when the vicissitudes of weather are great. Low damp situations are also favourable to its production; it seems however peculiar to some families, & this liability to affect particular persons & families. I can only account for, by supposing that there exist in them an original debility of the mucous membrane of the trachea, which yields more easily to the causes producing croup, & might be called a predisposition; it is also by supposing a debili

-tated state to remain after the first incursion of the Disease, that I can account for the great tendency it has to return in the same subject; this susceptibili-ty however gradually wears off as they grow older.—

The symptoms of this Disease are not always obvious in its forming stage, a Day or two previous to an atta-ck the child shews a Disposition to be inactive & fretfull, the eyes are heavy, & there is usually a sli-ght cough & hoarseness, from which symptoms one would suppose the patient had taken a slight cold; but to these symptoms in a short time succeeds a peculiar shrillness & ringing of the voice, as tho the sound were sent through a brazen tube; at the same time says Dr Cullen there is a sense of pain about the larynx, some Difficulty of respiration, with a whizzing sou-nd in inspiration: the cough which attends is commo-nly Dry, & if any thing be spit up it is a matter of a purulent appearance, & sometimes filmy resembl-ing portions of a membrane; together with these symptoms there is a frequency of the pulse. a restl-essness & an uneasy sense of heat.

When the internal fauces are viewed, they are sometimes without any appearance of inflamation, but frequently a redness & even swelling appear, & sometimes in the fauces there is an appearance of a matter like that thrown up by coughing, with these symptoms now described & particularly with a great difficulty of breathing & sense of strangling the patient is sometimes suddenly hurried off. The countenance also exhibits great anxiety, & from the violence of the struggle the head & face are covered with sweat & the lips livid.—

Croup is to be considered as a very dangerous disease destroying the patient sometimes within twenty four or thirty six hours; more usually however when it proves fatal the system withstands the conflict to the fourth or fifth day, & sometimes longer, when portions of the membrane are brought away from the trachea. The unfavourable symptoms are indicated by the great anxiety, & difficulty of the patients breathing, fever violent, frequent fits of coughing, voice becoming more shrill, & pulse irregular, &

intermitting. The great fatality of this disease is I conceive always to be attributed to the effusions produced during the inflamatory stage, or to an infarcted state of the vocal cords, & other parts about the larynx, thereby closing the rima glotidis or rendering it so small as to be easily obstructed by the secretions, & never to be attributed to spasm as indicated by Dr Cullen & others, for the reason before offered. When this disease terminates in health it is by a resolution of the inflamation, by a free & copious expectoration the dispnoea leaving the patient. Most of the dissections, made in children dying of croup, have shewn a sufficient cause of death from the effects of inflamation in some part or other of the windpipe, or its ramifications. The cure of this disease demands a prompt & active attention on the part of the physician & this consists chiefly, if not altogether in counteracting & removing the membranous secretions which constantly endangers suffocations, particularly when the glottis is much affected with inflamation

& swelling, & in very young subjects the danger must be still further increased from the very diminished size of these parts. There is in the patient a constant effort, by coughing, to remove this viscid secretion, which for the most part is ineffectual.

A variety of remedies have been accommended in the treatment of croup, none but such as are calculated to subdue inflamation, can be of any use, any others would be injurious. —

Emetics are of unquestionable advantage, & I may say indispensable, they frequently give effectual relief without any other remedy. It is only however in very slight attacks that we should rely wholly upon them, in the forming stage while yet the disease is local, they will be greatly assisted by the warm bath; should the disease be ushered in by febrile action this practice would not be admissible: emetics seem to cut short the disease in its nacent state by depressing the powers of the general system. consequently the circulation, & by promoting

the secretions on the mucous surface, thereby relieving the congested & weakened vessels. Can we attribute any of their beneficial influence in the forming stage to the mechanical action which they induce? whenever there are offending secretions to be removed it is by their agency that it is effected, & hence their indication is obvious throughout the disease. When there is danger of suffocation from this cause such is the insensibility of the stomach in some cases that the ordinary emetics often fail, & here it is that the bichloride of Mercury produces the happiest effects, used in very minute doses till an emesis is produced. When the febrile symptoms have become developed, & emetics fail to give effectual relief; copious bloodletting is to be premised, it should be carried to the extent of producing a decided impression upon the system; should the symptoms not yield we may again resort to the lancet In all cases of Croup says Dr Ferrier which I have seen. I have found it necessary to bleed

immediately, & when I have seen the patients suff-
-iciently early to entertain hopes of saving them, I
have directed the evacuations to be continued so
as nearly to produce fainting; this, says he, is the ess-
-ential point of cure, without which, no relief can
be effected; even if the patient should not be
seen till the day succeeding the attack it is pro-
-per to bleed ad deliquium. If the subject be
plethoric & the difficulty of breathing, & restless-
-ness be great. by thus using the lancet boldly at
the commencement of the attack the inflamatory
action is abruptly broken in upon, & the disease
suddenly checked. Independently of the check which
it gives to the tracheal inflamation. it has the effect
also of facilitating the operations of emetics, by rem-
-oving cerebral congestion & the consequent insens-
-ibility of the stomach to their action. The utility
of abstracting blood locally in this or any other inter-
-nal inflamation seems to me very questionable when
the diseased vessels can not be approached. the topic-
-al bleeding (if it should act beneficially) must

be through the medium of the general system: when however the inflamation is seated externally as in the tunica conjunctiva, the case is different. after subduing the general circulation local bleeding then will, by immediately emptying the diseased vessels, allow them to resume their natural health. Such is the influence of an impeded respiration on the circulating forces in some cases of croup that one might be deterred from the use of the lancet, the pulse however will rise as respiration becomes more free from blood letting, the abstraction of blood under these circumstances relieves the congestion & the swelling about the larynx. The next remedy in this disease of importance is Calomel, it is the most effectual agent we can employ when the inflamation about the larynx remains insensible to the judicious use of the lancet & other antiphlogistic means. This article exhibited in free doses from 5 to 10 grains every third or fourth hour will soon subdue the disease, its virtues are not derived from small doses, some prefer giving

a large Dose of Calomel at once instead of the ordinary emetics, it seldom fails in this way to produce a copious emesis, & act at once briskly as a cathartic; the noisea & relaxation produced by the calomel is of much longer Duration than that which attends the usual emetics; a hundred grains of calomel have been given to children under 7 years of age in hopeless cases with success: It is a singular fact that children in some cases will require nearly as large doses as adults. The polygala Senega has been used as an emetic; its stimulating properties however render it objectionable, in this respect it's greatly inferior to tartar emetic which is at once prompt & antiphlogistic in its effects. After the inflamatory action is reduced, a dry hoarse cough & some difficulty of breathing may remain & then it is serviceable given in Decoction so as to excite noisea & some vomiting. It also acts by its Diaphoretic & expectorant powers. Dr Archer who introduced this article in the treatment of

Croup, attributes its virtues chiefly to its stimulant effects & the extension of that stimulus to the trachea.

The warm bath is a usefull remedy when applied at the proper time. there is nothing more common than to resort to it in the early stages of inflamatory disease. in this way many have been sacrificed particularly children, it never fails to increase the excitement. While the disease consists in a morbid excitability of the parts about the trachea, without any participation of the general system the warm bath with emetics will frequently stop the further progress of the disease; if this state, however be neglected the lancet & other means must be resorted to. Blisters applied to the throat are generally serviceable after bleeding, & in the reduced state. The inhalation of warm steam has been recommended by Dr Home as serviceable, Tracheotomy has also been spoken highly of by Dr Michaelis as offering an opportunity of bearing away the membranous secretion from the trachea. but this can scarcely be considered as usefull

it can never arrest the inflamatory action or put a stop to the effusion. Throughout the whole course of this Disease an antiphlogistic regimen will be necessary & the bowels kept soluble by purgatives. The patient should, upon recovery, be kept warmly clad in flannel, & the greatest pains taken to avoid exposure to cold & vicissitudes of temperature.

I can not close this paper without an acknowledgement of the many obligations I am under to each one of the Professors of Medicine in the University of Maryland for the many advantages I have received from them during the prosecution of my studies. They will therefore please accept my sincere wishes for their individual happiness & prosperity. & I trust that their exertions may ever meet with that reward which they so justly merit.

The Author

An

Inaugural Dissertation,

(Containing some remarks)

On the Anatomy and Pathology of the Mucous Membranes;

Submitted to the examination of the Board of Trustees, and the Medical Faculty, of the University of Maryland, For the Degree of Doctor of Medicine,

by John Addison of Baltimore, Maryland.

1830.

To F. E. B. Mintze, M. D.

the following Dissertation

is respectfully Inscribed.

It is a fact ascertained by the experience of those, who have investigated the subject, that disease is confined, in a great number of cases, to a single membrane, and that in each particular texture has its own peculiar characteristics.

Without attempting to describe the peculiarities in each, I shall barely premise that it is my intention, to make a few remarks on the structure and pathology of the mucous membrane, and, in doing this, I shall only take such a view of its anatomy as will enable me to understand the nature and causes of its diseases.

The mucous membranes derive their name from the fluid which is secreted by them and which every where lubricates their surface. This membrane is said to be but a continuation of the common integuments, into the cavities of

of which it forms the lining, and which, notwithstanding the number, and variety, of the cavities through which it extends, is every where continuous, having an external outlet communicating with the skin.

Viewed in this light, not as distinct and seperate membranes, lining seperate cells, but as a single tissue, extending through all the cavities, it has been seperated by anatomists, into two grand divisions.

The first, commencing at the mouth, lines the whole of its inner surface, and passing through the palato nasal canals into the nose, continues through its whole extent, is reflected through the sinuses, and extending through the lacymals ducts forms the tunica conjunctiva of the eye. Extending from the mouth to the pharynx, it sends a process through eustachian tube into the internal ear; it next penetrates the trachea, and extending through ~~bronchia~~ the

bronchia,

bronchia, its spread through the air passages of the lungs. From the pharynx it passes through the oesophagus into the stomach, and thence into duodenum, it sends off a process which passes through the ductus choledicus and through the branches of the hepatic ducts, and extending also through cystic duct, it is reflected into the gall bladder. Another, too, lines the pancreatic duct and its numerous branches. Finally, passing through the intestines, it terminates in the anus where it is again united to the skin.

The second division, beginning at the urethra, lines it and the bladder, and passing through the ureters, is reflected through the whole interior of the kidneys. It also passes through the ducts of the prostate gland into the vasa defferentia, and extends through their numerous convolutions. In women, besides being distributed to the urinary organs, it forms the lining of the vagina and uterus, and passing through the fallopian tubes and their openings to the peritoneum, forms the only example of a communication of a mucous with a serous membrane-

My object in giving the above anatomical description, shewing the continuity of its surface is to explain the extension of disease and the sympathy which exists between distant parts of this extensive membrane. An instance of the first we have in inflammation extending in the Schneirian membrane, which will sometimes extend to the trachea, and through ramifications of the bronchia into the air passages of the lungs. Of the second we need no better example than that afforded by worms in the intestinal canal, which are uniformly found to produce an itching at the nose, and in many cases an irritation about the anus. The proof two is equally strong in the case of calculus in the bladder, which gives rise to pain and itching in the glans penis.

The mucous membrane is almost every where connected by a dense tissue to muscles. This has been denominated, with little discrimination, a "cellular or nervous coat" Whether it is the one, or the other, I shall not undertake to prove, being more immediately concerned with the first named mem-

brane.

Bichat has asserted, that, like the skin, the mucous membrane has its epidermis, which is said to have been demonstrated by excoriation, by the action of boiling water, or the application of a blister. In all these experiments, however, Bichat acknowledges that he failed to demonstrate its existence; but he contends, that what he could not effect by his experiments was successfully accomplished by inflammation. Later ~~writers~~ writers remark that this continuation of the cuticle extends but a short distance into the cavities.

This membrane is remarkable for the glands which open on its surface, and which are distributed through its extent, but the ducts which convey the fluid to the surface are apt elude our examinations

The use of the fluid secreted in the membrane being to protect it from the contact of irritating substances, is secreted most abundantly in those cavities in which substances remain some considerable length of time. Any irritating matter too always ~~excites~~ produces

an increased flow of mucous to the part. This is exemplified by the introduction of the sound in the bladder, which is found to create a great accumulation of mucous, to the great inconvenience of the patient.

If we take into consideration the great extent of these surfaces, and the fact that they perform a secretion which is constantly to be thrown off, we shall be convinced of their vast importance in the animal economy, and that very serious consequences may follow any derangement in their secretions.

The changes induced in this membrane, affecting its health, are very much influenced by the vicissitudes of the weather. The application of cold to the skin by its constricting effect, is calculated to augment the sensibility, and increase the secretions of the mucous membrane. The first effect however of obstructed perspiration is to produce congestion of the vessels of the membrane, which is followed by an increased secretion from its glands.

Throughout its extent, there is a very considerable supply of blood vessels. This is proved by the blush of red which is so remarkable in cases of inflammation, and to this it is owing, that hæmorrhages are so frequent in

this tissue.

From the foregoing remarks, explaining the texture, secretions, and vascularity of the mucous membrane, it will be apparent that haemorrhages, and and inflammations are the diseases with which it is most frequently affected.

Haemorrhages were formerly considered as either active or passive, and were said to depend on two very different states of the system; one being supposed to be the consequence of high arterial action, the other of debility. I believe, however, it is rarely owing to the latter cause, though it may be occasioned by a weakened state of the blood vessels themselves.

It is generally preceded by a chill, and a small, irregular pulse, but attended, during the flowing of the blood, with fever, and a pulse, in many cases, quick, hard and full.

In treating haemorrhages two indications are to be attended to, the first to diminish febrile excitement, the other to form a coagulum at the mouths

of the bleeding vessels. The first may be answered by the abstraction of blood, and the full observance the antiphlogistic regimen and treatment, and the other, by the administration of astringents.

In the mucous membrane, the characters of inflammation are different in the different portions of its surface. Thus, while the trachea inflames, there is an exudation of coagulable lymph, in the intestines, and the urethra, there is a great tendency to ulceration. In all, however, there are some general peculiarities. On it, adhesions rarely take place, perhaps never, unless there is an abrasion of its surface, or a material alteration of its condition. In general, the secretions are at first checked, but followed by a watery secretion, which alters in its character, becoming more opaque, untill it will recover its former health and consistence... To describe symptoms, would be to enter into a description of all the varieties of inflammation which affect the different portions of the membrane. The treatment of all with a few modifications, is the same, there being one indication to be attended to: namely, to promote resolution, which is accomplished by ~~bloodletting~~, and all that variety of means, which constitute the antiphlogistic

plan of treatment

An Inaugural Dissertation.

On the

Muscularity & Physiology of the arteries

Submitted to the examination

Provost, and Professors of the

University of Maryland

For the degree of Doctor of Medicine

On the Fifth day of April 1830

By

John A Craig

of

Dorcester County

Maryland.

Felix, qui potuit rerum cognoscere causas

To

Nathaniel Potter M.D.

Professor of the Theory and Practice of Medicine in the University of Maryland.

Dear Sir

The high standing in the medical world which You have so long sustained, the Good which your valuable Lectures, & Precepts, have done, and the improvements in Practice which Your Genius has directed; would of themselves be sufficient to cause me most readily, to inscribe this to You. But I might justly be accused of ingratitude were I to pass over in silence this opportunity of acknowledging my many obligations to You, and of expressing my grateful sense of the advantages, by me enjoyed while a student of Yours.

With much respect,

I am Dear Sir Yours &c,

The Author.

Preface ~

In this age of scientifick research, Surgery, and Anatomy, have become much more lucid, and satisfa=torily, reduced to system. Chemistry, which a century back held but a mere name, compared to what it now does, in the scale of Science, or phylo=sophy, has within these last few years, made rapid strides, to the immensity of magnitude, which it has now attained. Mineralogy, and Botany have made energetic if not equal progress. But Phys=iology though steadily moving on to its Goal of perfection; yet in consequence of its almost inaccessibility, must for a protracted time, continue to make a slow and dragging March.

Sed omnia vincit Labor ~
Et speram hanc non esse exceptionem regulo.

The constitution, formation, and function, of the arterial system: I have selected for the subject of this my inaugural address; and hum=

humbly hope though the style may be limping and the arguments, (which I may advance) futile; yet when the reader becomes aware, that they are the issue of one totally inexperienced in Composition: and considers that 'tis not from a disposition on the part of the Author, to throw his puerile effusion before him, but necessity; he may be inclined to pass over with lenity errors unavoidable on subjects so intricate as Physiology embraces.

Structure of the Arteries.—

Regarding this subject there has been much variance of opinion and controversy. Haller, & Bell, differ essentially in their descriptions. The former declaring, that the arteries have no proper and common coat; but that they derive an external or merely incumbent integument in the Thorax from the Pleura; and in the abdomen from the Peritoneum.

In the neck, arm, thigh &c that a sort of thicker cellular substance surrounds them, and that the Dura-Mater imparts a kind of capsule to the carotid & vertebral arteries, of the brain, at the same time asserting the absurdity, of there ever being such a thing as a Tendinous coat.

Bell to the contrary states that after the cellular investment of an artery is removed we come at once to a Tendinous coat which he

which he calls the external, and which according to him is so obvious that it can (particularly in old people) by maceration, be divided into several layers. Yet Haller in direct terms says, that there is no tendinous coat of the Arteries distinct from the cellular substance is evident from **maceration**, by which the inmost stratum of this arterial tunic (or the cellular) before condensed becomes cellular. In speaking of what Bell calls the middle coat; Haller passes it over by merely stating that within the cellular, and nearer the cavity of the artery we find fibres in general orbicular; recollecting however that no fibre any where makes a complete circle: but that many of them conjoined, with their extremities turned off sidewise seem to form one ring, and decreasing with the diminution of the Artery, seem to be altogether wanting in small animals. Bell

contradicts every syllable of the preceding sentence. He does not say with Haller that between the cellular and inner, but the tendinous and internal the muscular coat lies, nor does he say that the muscular coat is only to be distinguished in the large arteries, and its fibres then only running one third around the vessel; but to the contrary says the muscular fibres are less easily visible in the greater than in the smaller arteries, and that each fibre entirely surrounds the artery; giving it contractility. Discoveries more modern than those of Haller prove him wrong in many of his hypotheses. Bells theory has much more probability in it. and in my opinion is a much better data upon which we may rely in our research into the causes of the circulation and its many phenomena. There is more Elasticity in the larger arteries, but not so

so much contractility, and the reason is obvious the muscular coat whose fibres (upon which the contractility depends) in them is scarcely demonstrable; but as we approach those which are diminutive we find a gradual increase, shewing a wise provision of nature. For the Aorta and other largish vessels, near the heart stand in need of nothing more than elasticity which is well calculated to resist the shock of the hearts action; but in the extremities this is not necessary, for there the violence of the hearts motion is subdued or diminished, and consequently there is a necessity for a second or adjuvant power similar to that of the heart for the purpose of effecting the circulation; and that power in my opinion may with propriety be looked for in the muscular fibres of the middle coat. The internal coat has been generally greed upon as being * very thin, smooth, and easily

asily torn especially in its transverse direction.

There are cellular expansions between the extern=
al and middle, and the internal and middle coats.

The arteries are themselves nourished by the
vasa vasorum which pass to their proper coats
and by perforating the sheath are carried throu=
=gh as it were by the support and connection
of the cellular membrane. The office of the
Lungs is to render the blood (by its chemical action
upon it) capable of supporting the life of
the body, and most especially the irritability
of the Muscles both of the arteries, as other parts;
and 'tis this which gives activity to the circula=
=tion by causing more energy in the arterial fib=
=res.

The Muscularity of the Arteries

That the arteries have a contraction depending according to its extent either upon the state of energy, or irritability which they at different times, may possess, together with the greater or smaller quantity of muscular fibre which their middle coat may have been composed of; seems conclusive to me. Denman in speaking of uterine hemorrhage, says that the power of contraction in the arteries, is so energetic, that it will frequently, close the caliber (after the placenta has been suddenly torn away) and stop the hemorrhage, without either the complete contraction of the organ itself, or artificial, aid. The power of contractility, in the arteries has been most lengthily and pertinaceously disputed by many, persons who have experimented mechanically, upon them

and finding as they say upon their being pricked by a sharp pointed instrument, that they did not contract, have without farther doubt upon the subject determined them against the idea of such a power's ever being vested in them. Although arteries may not have the power of rapid or easily perceptible contraction, upon the application of our stimuli: yet we must remember, that the same law of nature, applies to other parts, the muscularity, and contractility, of whose coats, cannot be questioned. For instance the stomach and intestines. These though possessing a vermicular, or peristaltic, motion sufficiently active while in health (stimulated by that which is natural to them) to contract upon and force out their contents; yet when in experimenting upon them, we use artificial stimuli; we always find the same inaction which we observe in the arteries, under like circumstances. Is

It is true by the application of Galvanism they (unlike the voluntary muscles: which on the application of such a stimulus, are quick in contraction, and owing to their Elasticity equally quick in assuming their former dimensions) slowly and reluctantly contract, and when once that is effected, they remain so: never requiring their former size. In answering to foreign stimuli great difference may always be observed to exist between Voluntary and Involuntary muscular fibres: as may at any time be satisfactorily proven, by taking one of each and exposing them to the action of a Galvanic battery or Voltaic Pile. The Voluntary muscle will be seen promptly to answer to the stimulus with a quick contraction, and with equal promptness will return to its wonted size; but the other as reluctant in its obedience to such stimuli as to that of

the will while within the living body: if it contract at all will always after remain so.

But why need I stop thus to endeavour at a confutation of what Bersehuir and others since ~~since~~ Haller, (who argued from such experiments) have denied? Bersehuir shortly after Hallers experiments upon the arteries tried the same, and reported that they did in some degree contract on the application of ordinary stimuli. And his result has been amply confirmed by the successive investigations of Drs Thompson, Philip, & Hastings. Dr Philip placed the web of a frogs foot in a microscope, and distinctly saw the minute ramifications of the arteries (there in) contract upon the application of those stimulants which produce a contraction of the muscular fibre elsewhere. He also publishes that he

distinctly observed the circulation in the smaller vessels to continue for some time after the heart was entirely removed from the body. The same observation was made by Dr Hastings, proving beyond a doubt that, such an effect must have been produced, by the action of the vessels, independent of the hearts agency. Those who are not willing to yield to the opinion of the certain muscularity, and innate action; being somewhat at a loss to account for many Phenomina of the circulation; such as difference of pulsation, which is sometimes to be met with in the radial arteries of the same person, at the same time, Inflammation, blushing Apoplexy &c &c have been forced to this assumption; that the Capillaries, are a distinct set of vessels from the arteries and veins; and to place in them all that power, which reason

and fact, teach us is vested in parts of the animal economy, other than that of the heart. I must here ask the question; Has any precise line of demarcation been satisfactorily, or indeed in any way pointed out, by which we can say these are the arteries, those the Capillaries? Or when I say these vessels to which the name of capillaries has been attached; are exclusively the minute ramifications of the arterial system. Can any one except upon hypothetical premises, contradict such an assertion? As the muscular fibre continues to increase in equal ratio to the decrease of the arterial circumference; I am perfectly satisfied that the minute ramifications, or in other words the Capillaries have more contractile action, than the trunks have. But at the same time

we must observe, that each and every part of the arterial system has more or less contraction. As an example in proof of which we have in Paronychia the throbbing of the Digital arteries extending upwards and affecting those of the wrist &c; and in many cases is so obvious as not to escape the observation of the most inobservant. Dr Horack (in his treatise on Phrenitis) says that the application of cold water to the head in the disease is injurious frequently from an increased flow of blood to the seat of disease, which follows its use. This though I imagine never takes place where the water is kept applied a sufficient time to act as a sedative, thereby quelling inordinate action the proximate cause or disease itself; yet may be very satisfactorily explained, when we know that

-ut, a small Quantity of cold acts as a stimulent & tonic, which necessarily must increase the action in those cases of the already preternaturally irritable Arteries. The arteries of the head in acute inflammation of that organ; have their action so increased, that some writers have stated their having seen the head moved while laying on the pillow, by them at each pulsation. This I am inclined to believe is saying too much; but certainly it is, in such cases the increased local action is sufficient frequently to draw to it the attention of both the scientific, and ignorant, who may be in attendance upon the patient. How then can we account for this phenomenon, unless, by the admission of arterial contraction? The Great controversy respecting the vital powers of the Arteries has been concerning their contractility, which

necessarily resolves itself into a another question, intimately connected with the first: by, whether the transverse fibres which have been called the muscular coat, are justly entitled to the name of muscle?

To ascertain which; many Physiologists have gone to much unnecessary pains, in testing their constituent parts by Chemical analysis, also other (and as they call them proper muscles) and comparing their result.

By chemical analysis that a difference may be found between the transverse fibres of the arteries, and other muscles, will be most readily admitted; but that objection, to their muscularity, I consider altogether inefficient; when we reflect upon the decided marks of contractility which is manifested in many of the lower classes of animals, as the Actinioe &c the substance

nce of which is at least as unlike that of the warm blooded animals, as the transverse fibres of the arteries can possibly be conceived to be. Cullen & Bichat are agreed upon the theory that the greatest phenomena of the circulation have their existance in the action of the capillaries; the latter of whom asserts that they have a contraction essentially independant of the heart.

Lerminier on the article of circulation very ingeniously argues, that the circular fibres are not muscular nor the arteries contractile, but restricts the term artery to the larger vessels, and supposes the capillaries to be a set of vessels distinct from all others.

An hypothesis which neither Anatomy or physiology will sustain him in; for as I have before stated: no one can demonstrate (even if there be) such an arrangement.

ment. The fact that the Aorta does not con=
=tract to a very perceptible extent has
long been known and by many, that contrac=
tility has its power increased in equal ratio
to the diminution of each artery according
to its size, on account of the gradual thick=
=ning of the muscular coat as it recedes from
the heart, and becomes minutely divided.
Therefore I have come to this conclusion
that the most minute arterial branch=
=es or Capillaries (if you like) are of grea=
=ter contractile power according each to
its individual size than the greater
arteries, and without their aid we could
have no such thing as circulation.
An elaborate set of experiments was
performed by Hunter, the object of which
was to distinguish between the elastic and
muscular power of the arteries in which

, the existence of this latter appeared to be fully established. He bled an animal to death, by which the arteries were brought into a state of complete contraction portions of them were then taken and stit. open longitudinally and being distended by a weight in the transverse direction: for a short time 'twas found on the removal of the same, that they obviously contracted. There is in the animal oeconomy a phenomenon, concerning which no Physiologist whose works have come under my notice; has by any means satisfactorily accounted for. Namely the sudden erection of the Penis. Those who have argued against the contractility of the arteries, suppose that effect to be produced mechanically. They say that the Erectores Penis, when stimulated by too great redundancy of semen contained in

in the Vesiculae seminalis contract thereby pressing the penis against the rami and symphysis pubis; compress the vena magna and prevent the blood injected into the organ from being returned to to the heart as is the case, in its limber state.

I imagine such theorists have not given themselves the trouble of fully investigating the relative anatomy of these parts, or certainly they never could have been so grossly deluded, as ever have suggested such an explanation. Let us inquire into the Anatomical and Physiological relation which these muscles bear to other parts? then we may begin by asking this question, does the Erectores arise from the rami, or body, of the Pubis, that they should have been supposed by their contraction to raise the penis? Or are their insertion such that did they act at such times by contraction

tion, they could possibly produce the effect, which has been assigned them? I am not a little surprised that Bell, who in his anatomy of these parts; makes mention that the erectores are supposed (by pressing the Penis against the pubis) to compress the great vein and so cause an erection; had not from his knowledge of Anatomy exposed the error.

The Erectores have their origin from the most inferior portion of the Pelvic bones by, the inner edge of the Tuberosity of the Ischiatic bones, and run along up flaky, thin, and flat, over the crura-penis; and end in a delicate, and flat tendon, upon the crura about two inches from their origin.

With such facts presenting themselves, I should be much more inclined to call these muscles Depressores, which appellation would in my opinion, bear along with it better the principles of physiology, than the

the one which has been so unhappily bestowed upon them. Grant that they have an action, to which they are excited by sensial desires; as anatomists have proved them to have an origin inferior to the organ upon which they are to act; how could Physiologists from such premises draw such an erroneous conclusion, as that they act upwards? An absurdity too clear to require argument in confutation of. Nor will I here enter upon any other means of confutation than by merely, asking this question; can a body fall against its own Gravity? or a muscle act contrary to its origin & insertion? Or in other words can a force below pull upwards? I could endeavour upon different principles to account for the same effect; which, by the admission of arterial muscularity, can be much more satisfactorily done. For the first instance

e, where the effect is produced by volition, or libidinous desires; the first impression originating in the brain is from thence, through the nervous communication conveyed to the arteries, of those parts which, as they were formed by nature obedient, especially to such impressions, being thus stimulated put on an increased action of their co=ver, and as the vena magna which must equa=lly at all times perform its necessary part, that of returning the blood, by the arteries conveyed to the organ (it not having a muscular or contractile coat to be stimulated) cons=equently when the action of the arteries becomes increased they will in a propriety, as in this case project the blood forward to an organ much faster than it can be conveyed back to the heart. This would seem to me more rational ~~to me~~ than to suppose an erection the effect of the Erectores. Tis true that sometimes without volition an erection may be produced

but this I think can most confidently be asserted the result of seminal secretion, or irritation, acting upon the nerves of the parts, thereby stimulating the arteries, as in the afore said, case to increased action. We in part can agree with those who might be inclined to attribute this effect to the minute arteries or capillaries; but in most cases, so sudden is an erection produced: that we cannot hesitate in affirming that the combined action of both larger and smaller arteries go to produce it. Tis an incontrovertible law in the Animal oeconomy that a specific stimulus acting upon an organ for which nature designed it should call forth the specific function of that organ; consequently when the spermatic capsels have secreted an over quantity of seminal fluid, this becomes an exciting cause to the peculiar action of the nerves to which the stimulus is first applied, thence the arteries are stimulated and act accordingly. That inflammation is caused as many a priori by the want of energy or tone in the capsels of the part,

part thus affected, goes far in my opinion to prove that action in them is necessary to effect, at least a salutary, circulation. But in this I do not believe for surely if the circulation did depend upon the heart as the only source of power from which it received its energy and that through it independently of all other agency, all which we now observe were produced; then could we with much confidence say, that although by some means, or other the vessels of any part of the body were debilitated, yet as they (according to those theorists) act as mere hydraulicks or conduits; relaxation in them would not cause congestion, but to the contrary would allow the fluid to flow through them (propelled by the Vis a tergo) with much less difficulty, their calibre being then larger than it otherwise would have been. If a small living artery be cut across it soon contracts so as to close its canal, and arrest the hemorrhage, and by this mean bleeding arteries have been stopped obviating the necessity of a ligature; this is a

a self evident thing, and one which every practitioner is familiar with. While an animal is bleeding to death the arteries accommodating themselves to the decreasing quantity of blood contract far beyond the degree to which their simple Elasticity would carry them; and they relax after death; showing that contraction which is a living principle in them is absent after death takes place, there then being but Elasticity left. Dr Hales took seventeen quarts of blood from a horse before it died, in whose body, only three quarts more were found, and yet the moment before death says he, the tension of the arteries sustained a column of blood two feet high in my experimental tube; proving beyond doubt the ability of the arteries to contract upon and accommodate themselves to their contents. When a living artery is tied the part between the ligature and nearest branch on the side of the heart gradually contracts, and finally becomes an impervious cord. To those who believe that inflammation, or all—

all preternatural redness has its origin exclusively in vascular debility and relaxation; I would propose these questions. Under what head is Ether placed when tis applied to the skin the air being excluded so that it cannot evaporate? The answer is clear; tis most certainly a stimulent. What is it though, when the atmosphere is not excluded and it suffered to evaporate, which it does with the greatest rapidity? Tis then as unquestionably a sedative. Then what are its very apparent effects? When for instance we pour Ether in the palm of our hand, and apply it so closely to any part of our naked body (for a short time) that it cannot evaporate; instantly upon removing the hand the skin will be found red, but in a few seconds after, it will assume a deathlike paleness. This must have fallen under the observation of many, and I am at a loss to know how those believers of relaxation & debility would give a satisfactory explanation of such effects. Certain it is that in the first place the minute arteries are stimulated to inc-

increased action, there being a stimulus applied, and in the second, they are subdued by a sedative. The arteries are in a living person always full of blood, as the microscope shews, both in their diastole & systole. Says Haller the contraction of an artery follows in regular succession to dilatation. He goes on farther to state that the heart having emptied itself and removed its stimulus, becomes quiescent. But the artery, at that instant by the innate elasticity residing in its circular fibres, being irritated by the same stimulus by, blood thrown into it contracts, and expels as much of it as has been received into it, above its mean capacity

It appears to me that in this clause of Hallers there are too many qualities of an artery brought in to effect that by the contraction of the artery and expulsion of the blood which is injected into it by the heart above its mean capacity; which elasticity itself is in all respects equivolent to. What is elasticity but that property of a body in which there is a force by which it endeavors

ve, for the restoration of its natural size.

Then I am at a loss to know why a person believing in the vis a tergo should wish to beg in Irritability to aid him in his inquiry into the circulatory phenomina? In conclusion I have but to remark that from various experiments we are fully justified in the belief that the arteries possess a proper contractile power; and that many arguments can be adduced to prove, that this power resides in their transverse fibres. It appears to to me most satisfactory likewise, that this contractile power is principally seated in the more minute or capillary arteries, while the large trunks possess it in a much less degree. Indeed every fact, with which we are acquainted respecting the mechanism, and functions of the sanguiniferous system leads us to the same conclusion, that the large arteries are to be regarded not only as tubes, by which the blood is conveyed through the system, but active adjuvants

-ants in the circulation. Yet that it is in the smaller branches o Capillaries that we must admit the Greatest action. This is an inexhaustible subject; one upon which Volumes might be written; but in as much as I have now come up to, if not transcended, the bounds, of the readers, (if such this may have) patience: shall content myself with the remarks, already made.

Finis

An

Inaugural Dissertation

on

Crural Hernia;

submitted to the examination of

the Provost, Trustees & Medical Professors

of

the University of Maryland,

by

Thomas Littig,

for the Degree of

Doctor of Medicine

March 1st 1830.

By the term Hernia in general we mean a protrusion of any organ or viscera through the walls of the cavity in which they are contained. The word Hernia is derived from Ερνος a branch, from its protruding out of its place. But by this term Surgeons understand a protrusion of some of the abdominal viscera out of that cavity but still retained within the common integuments. There are nine varieties of hernia from the abdominal cavity; according to the place or part at which they are protruded. But as it is not our intention to treat of hernia in general, we shall confine our remarks to one of the varieties viz. Crural Hernia, which is a protrusion of some of the contents of the abdomen through the crural arch under the integuments of the thigh.

The cavity of the abdomen is always filled by its viscera & the parietes are well secured by the admirable arrangement of its muscles; the fibers of each muscle crossing that of the other which is in contact with it transversely, thereby forming by its three layers of fibers a complete network. The abdomen is acted upon by two opposite forces which counterbalance each other; the viscera acting against the muscular walls of the abdomen & the parietes acting again upon the viscera an equilibrium is established. But there are certain ~~certain~~ parts of the abdominal parietes which are naturally weaker & consequently make a much feebler resistance to the action

the viscera than other parts and especially that part which extends from the pubes to the superior spine of the ilium. And this part is some times farther weakned by malformation, accidents &c.

I shall now give an anatomical discription of the parts concerned in crural hernia. The external oblique muscle arises from the eight inferior ribs near their cartilages & from the spine of the ilium. Its fibers run obliquely downwards and fowards and terminate in a thin broad tendon which is inserted into the linea alba its whole length about an inch and half above the pubes the tendon splits. The anterior column is inserted into the symphisis pubes and the posterior into the spine of the pubes. The division of the fibers of this tendon forms what is called the abdominal ring. From the spine of the pubes it stretches acros to the anterior superior spinous process of the ilium. Those fibers which arise from the inferior ribs decends perpendicularly to be inserted into the outer edge of the anterior half of the spine of ilium. The folded edge of this tendon which is stretched acros from the anterior sup. spin. process of the ilium to the spine of the pubes is what is called Poupart's ligament. The internal oblique arises from the three inferior lumbar vertebra; from the os sacrum, from the whole of the spine of the ilium and from the outer third of Poupart's ligament. From these origins the fibers of the muscle run in different directions, the posterior portion ascends obliquely forwards, the middle portion is oblique

and some of them in a horizontal direction and the anterior portion tends obliquely downwards, inserted into the ensiform Cartilage, into the Cartilages of the seventh and all the false ribs. Its tendon divides into two layers going over and under the rectus, to be inserted into the linea alba; its anterior and undermost part is inserted into the os pubes. The transversalis arises from the inner part of the cartilages of the seven lower ribs, from the last vertebra of the back & the four superior of the loins, from the whole the spine of the ilium internaly & from the outer part of Pouparts ligament and is inserted into the ensiform cartilage and the whole of the linea alba excepting its lower part. From the origin and insertion of these two last muscles it will be perceived that there is a triangular space not supplied with any covering from these muscles or their tendons, this space is supplied with a strong fascia called "fascia transversalis. It comes down over the abdomen between the peritoneum and the muscles & running across this space goes under Pouparts ligament where it joins the fascia iliaca, which comes down over the posterior part of the abdomen passing over the psoas & iliacus internus muscles. These two fascias join and at this place become thicker & thus form the "Femoral ligament or Hey's ligament. In the center these fascias are not joined but leave a small open space thro' which the femoral artery a ~~vein~~ pass out & the great vein of the leg called the femoral vein pass into the

abdomen. The vein lies on the inside and the artery on the outside. This opening is entirely filled up by the vessels and cellular tissue, and it is thro' this space that crural hernia takes place. Hey's ligament extends from the inferior sup. spinous process of the ilium to the spinous process of the pubes. It is connected to Poupart's ligament by cellular tissue. We shall next describe the fascia lata of the thigh which consists of three layers. The first layer is reflected off from the external oblique or Poupart's ligament. There is an open space left in the fascia on the inner part of the thigh towards pubes thro' which the superficial veins & absorbent vessels pass into the abdomen: the external layer passing over the thigh from Poupart's ligament presents at this place a crescentic margin & below this space becomes intimately blended with the other layers. The second layer is formed by a continuation of the fascia transversalis and in like manner with the first presents a crescentic margin to this space & like the other soon becomes intimately blended with the other layers. Thus we have two layers one under the other forming crescentic margins around this space which is formed by them. The third layer is a continuation of the fascia iliaca which keeps close to the muscles & forms the floor to this opening in the fascia lata and over which the great vessels lie, & fascia with glands absorbents

veins & fill up this space. It comes down from Poupart's ligament over it and is firmly attached to these crescentic margins and passes inwards called the cribriform fascia. The hernia is always protruded on the inside of the vessels, pushing the loose celular tissue before it. It follows the course of these vessels into the space we have just described in the fascia lata & pushing the cribriform fascia before it generally perforates it at the place the place where some of the largest vessels pass thro it or extending it & converting it into one of its sacks, it rises over the crescentic margins towards Poupart's ligament and lies over it on the abdomen. The viscera thus protended carries with it a fold of the peritoneum and the loose celular tissue which fill up the crural arch and then comes in contact with the superficial fascia. The epigastric artery coming off from the external iliac about an inch before it passes out to the thigh, runs up over the abdomen & passes on the outside of the crural arch. This artery sometime gives off the obturator artery. It is generally given off from the internal iliac; but when given off by the epigastric, it runs downwards by the internal margin of the ring. It may thus pass over the neck of the hernia; but most frequently it will be on the inside of the hernia. The hernial sack generally contains either intestines, omentum or both intestine & omentum. If a portion of the intestine alone forms the contents of the tumour it is then called <u>Enterocele</u>. If the tumour contain omentum alone it is then

called Epiplocele; and if both intestine and Omentum be contained in the sack it is then called Entro-epiplocele. There is a variety of inguinal hernia which in its situation resembles crural hernia; when the latter has passed over the crescentic margin of the fascia lata & turned over Poupart's ligament. It is when the contents of the hernia passing thro' the abdominal ring, remain in the groin or have not passed into the scrotum, this variety is then called bubonocele. Cases of crural hernia have been mistaken for bubonocele, and much mischief has been done to the contents of the hernia in the use of the taxis. In inguinal hernia the pressure made on the tumour by the hands of the operator must be upwards and outwards. While in crural hernia it must be directed first downwards and backwards and then upwards. But the true nature of the case may be very easily discovered. Inguinal hernia is always above Poupart's ligament while crural hernia is always under Poupart's ligament. If then we run the finger along this ligament and can thus trace it out in its whole course finding no tumour we decide at once that it is crural hernia. We may be able to distinguish a case of entarocele by the smooth slipery surface of the intestine. If it be distended with wind, inflamed or if there be any stricture on it, it will be tense, elastic, resisting the pressure of the finger, and painful. If there be no inflammation or stricture the tension will be slight and no pain will be felt upon handling it

then the patient coughs the intestine will feel as if it were blown into & when the bowel is returned a guggling noise will be heard. If the hernia be an Epiplocele it will have a flabby and unequal feel and will generally be indolent. If it be an entro-Epiplocele it will be more difficult to ascertain its nature, it will have somewhat the feel of both the other varieties. The hernia with its envelopes thus protruded thro' the crural arch into the groin, thro' the opening in the fascia lata, may be either reducible or irreducible & with or without strangulation. It is termed reducible when the protruded viscera lay quietly in the sack without pain and capable of being returned into the cavity of the abdomen with ease. The symptoms of this kind of hernia are as follow. The tumour is generally formed suddenly and is indolent, when the patient is in a recumbant posture its size is lessened and it is enlarged upon walking or taking exercise. When pressure is applied to the tumour it will be lessened in its size and when the pressure is removed it will enlarge again. The hernia will be found increased in size generally after meals or when there is any flatulency. The patient is generally troubled with colic, nausea vomiting & constipation in consequence of the displacement of the intestine. It very often happens however that no inconveniance of this kind takes place and all the functions are performed with but little interuption. By adhesions from the hernia to the surrounding parts it may become irreducible & the patient doomed to the inconveniance of hernia during life & by inflammation

produced by external violence, cold &c a rupture may take place forbidding any hopes of relief. The hernia may be strangulated at several points thro' which it passes. In the first place & most generally by the femoral ligament, secondly when it passes thro' the cribriform fascia, which is very strong & formed of transverse bands or fibers and thirdly by the crescentic margin of the fascia lata. Sometimes also (tho' we believe but seldom) by Gimbernats ligament, which is reflected from Pouparts ligament at its insertion in the spine of the pubes & inserted into the linea ilio pectinea near the symphysis pubes, presenting outwards a similunar margin. The symptoms of incarcerated hernia are; pain upon touching the tumour if the intestine be protruded & the pain is increased by coughing or standing on the feet. The pain is not confined to the part but soon spreads over the abdomen which becomes swolen and tense accompanied by sickness and occasional vomiting. The faces do not pass off, and fever supervenes. These may be termed the first symptoms. If the patient is not relieved the vomiting becomes more violent & frequent. At first the contents of the stomach only is thrown up but now bilious matter is discharged and ultimately faculent matter of an offensive character. The pain becomes more intense, the tension of the abdomen much greater, the fever is increased and general restlessness of an insupportable kind comes on. If the patient be not yet relieved, hiccough comes on which indicates that mortification is about to take place or has already

taken place. Suddenly all pain ceases and the intestine returns of itself into the abdomen or if not it is returned by the slightest pressure. This is followed by a copious discharge from the bowells and the patient and his friends vainly immagine that a cure has been atchieved; but the hiccough increases, the pulse from being hard and full becomes weak & languid, the extremities become cold, the skin covered with a cold sweat, the swelling and tension of the abdomen subsides. The eyes assume a glassy appearance, the skin covering the tumour is crepitus and the patient expires.

Upon the treatment of reducible hernia we only have to say that it should be returned as soon as posible and the parts supported by a truss. If it be irreducible we can not employ a truss & all that can be done is to support it by a suspensory bandage and forbid much exercise. We shall next notice the various measures to be adopted for the relief of strangulated hernia; and first of the taxis, by which we mean the efforts made by the hand of the surgeon to reduce the hernia. The patient is to be placed in a recumbent posture, the leg turned inwards and the knee bent, by which the fascia will be relaxed. The pressure must be made downwards, backwards and then upwards; but we should not make any violent efforts to reduce it in this manner. If the intestine be much inflamed the patient can not bear much pressure and hence it is improper. If we can not succeede-

by gentle Efforts we must resort to other means of relief. If circumstances do not forbid, we should now bleed freely and then try the taxis again. If we can not then succeede in reducing the hernia, the patient should be placed in a warm bath and the Efforts by taxis renewed. But if the bath be not prepared while it is preparing, as no time should be lost, Cold applications and Enemas should be tryd. Bladders of pounded ice should be applied to the tumour. or Ether droped upon it; but the last should be used with Caution, as by too sudden a reduction of the temperature, mortification may take place and the life of the patient be lost. A solution of nitrate of potash or alcohol may be employed to advantage. Injections of tobacco in smoke or decoction have been recommended, but we deem it on the whole a dangerous remedy, as it is likely to produce extreme prostration. If the Omentum alone be protruded together with bleeding we may employ Cathartics and Enemas, by which we will be likely to succeede. If all these means should fail we can not perform the operation too soon. We believe that many lives have been lost by delaying it too long. We shall next say something of Chronic Strangulated hernia, which takes place in hernias of long standing, from some degree of inflammation having been excited in the tumour. The symptoms are altogether less violent than in the acute stage. The part is exempt from the great tenderness & pain found always in the acute kind, and in a word tho' the symptoms be somewhat

similar in kind they differ greatly in degree. We shall be more likely to succeed in reducing this variety by the taxis, as the pain on handling it is generally but trifling. We should be careful nevertheless not to use violent efforts in pressing the tumour. We should proceed gently in all our efforts least we excite inflammation and change it thereby into the acute stage. If we can not readily succeed with our first efforts we should next bleed if we deem the patient capable of bearing it, We may then if we do not succeed proceed with our treatment as stated in the acute form, only we will have more time to try the various means mentioned above and should all these fail we may then as in the acute stage proceed to operate for its relief.

We shall now describe the manner of operating. Some surgeons recommend two incisions in the integuments in the form of the letter **T** reversed. One of the incisions is to be commenced about an inch and half above the crural arch, in a line with the middle of the tumour and carried down a little below the centre of the tumour. The other incision is to be made nearly at right angles with the first and drawn from the inside across the tumour to the outside. The angular flaps are then to be dissected up & reflected from the tumour. But the most of surgeons now are of the opinion that there is no necessity for a double incision. They commence about an inch

above the crural arch & continue it obliquely downwards & outwards.
The first incision brings into view the superficial fascia, which is
reflected off from the external oblique muscle, and is the first or
anterior covering of the sack. If the patient be emaciated and
it be a recent hernia this fascia will not be readily found
as it then adheres closely to the skin. When we divide this fascia
we come next to the cribriform fascia, if the hernia has not perforated
it, but generally we will find it perforated by the hernia. After which
a person not well acquainted with the anatomy of these parts
would suppose that they had now come down upon the hernial
sack itself from its appearance it being only covered by a thin
fascia, called fascia propria, which the hernia pushes before
it in passing thro' the crural ring. This is next to be carefully
divided from the neck to the fundus of the sack longitudinally.
When we have divided the fascia propria if the subject be
fat we will find an adipose membrane laying next the sack.
Having reached the hernial sack it is next to be opened which
requires a cautious procedure least we wound the intestines.
Persons are very apt to mistake the fascia propria for the sack
itself and the stricture is then divided on the outside of the sack
while the intestine may be strangulated inside and thus pushed
into the abdomen. In order to divide the sack with caution it
will be well to pinch up a small portion of it between the fingers

and sliding one on the other we will be able to ascertain if we have taken up any thing else but the sack. Being satisfied that we have not included any thing else between the fingers we may cut a small hole and introduce a director and thus open the sack from the fundus up to the crural arch at which place we have stated the stricture most frequently occurs and at which place we will now suppose it to be. We are next to insert our finger nail under Hey's legament at the point of the stricture, then passing a director over our finger insert it under the stricture and taking a probe-pointed bistury we divide the stricture. Cutting directly upwards into the angle formed by the epigastric and obturator arteries always supposing them thus situated; as we can not ascertain by any known method whether the obturator artery is thus given off and surrounds the neck of the sack or not. Which being done the stricture thus divided we may easily return the protruded viscera.

April 5th 1830

To the provost faculty and trustees of the university of maryland,
this inaugural dissertation is respectfully submitted by W. W. Rumphey of Va

April 5th 1830

To N. R. Smith professor surgery in the university of maryland

Dear Sir

Owing many oligations to you for the kindness and freendship you have always manifested towards me. permit me as faint and imperfect testimonial of my respect and esteem to inscribe to you the following pages. They contain nothing of merit in themselves — the only value, if eney thare be, that can be attached to this dedication is that it comes from the heart of its obliged and grateful Author. W. W. W. Pomphrey

An inaugural disertation

on the influence of the mind in producing changes of sensation and morbid action in the human system.

Fundamental to every process of reasoning there primary truths, which being admitted; without debate, become the groundwork on which the whole superstucture is erected.

Thus in algebracial problems certain elements are asumed; and in our discussion about the laws which regulate matter we take it for granted that matter does exist, and that it is known by certain properties.

So in referance to the theme of inquiry now proposed, I regard the separate existance of the mind from the body, as self evident truth. For were I to contemplate the mind merely as a modified result of the organization of the body, there would be a palpable absudity in attempting to show, that one portion of the body had an influence and agency on another portion; there being a pervading influence of harmonious cooperation exerted upon the entire circle of the bodily organs. But the mind although intimate union with the body, is yet a distinct entity. Though running in parall lines with the body and deeply implicated in all its movements, still manifests a superior nature and a far more noble desting.

View man with a philosophic eye from the cradle to the ~~gra~~ grave! See him wailing his infant cries beneath the canopy of a mother smiles, then behold the same being immured within the narrow confines of the sepulchre; And say ye sage speculators! can you discover any thing either at his birth or in his meridian prime or in his mournful exit from life which furnish-

ow with convincing proof, that the mind is but a part of frail body — that the
ktes and jewel are the same?
is the part of reason to draw deductions from premises made known, and infer
ound conclusions from data indisputably established. But it is the part of
adness, even to deduce sound conclusions from mistaken premises.
eason should abstain from all presumtious inferences, where proof is not
fforded.
Now apply this rule of correct philosphising to the subject of mind. We have
no evidence that the mind and body are the same, and we should, therefore,
not too confidently insist on a thing so utterly above our cognizance
Yet we have cogent proofs furnished, that the mind is governed by laws essen-
tially distinct in nature, from those which control our material fabric;
hat though a very intimate connexion may exist between them, yet there is
ample evidence to demonstrate that they are not identical.
onnexion will not prove identy; ~~neither~~ will the reciprocal agency of mind
nd matter on each other, establish, in the view of correct philosophy, the opin-
ion, that the mind is but a subtile, spiritualized product of the brain.
A subject is known by its own predicates. The body is recognised by its own
properties; The mind is recognised by its own attributes. There is no sort of
just comparison between the properties of the one, and the attributes of the other.
The operation of mind differ essentially from the inert properties of matter,
and the causes which induce activity in the mind, have no kind of
agency upon the physical organization of man. The mind is gover-
ned by motives; The body is actuated into movements by extrinsic
applications.

The ancient philosophers denominated the mind to be a self-
moving, and motion giving power. They designated the body as the
organ of the mind, the physical medium through which it acted.

Phrenology, not satisfied with the simplicity of this opinion,
has boldly come forward and challenged our acceptance; and

w a tone of high demand insisted, that it possesses the only key which can
nlock the mysteries of the human intellect. In an essey of this kind, I
ave not time, to enter the arena of controversy against this utopian
hem, which sprung from the fertile region of novel doctrines; Germany,
nd which has been fostered in the hotbed of all extravagant opinions.

The phrenologists take certain facts for granted, and then endeavour
o erect their sytem on such postulata. They are not so modest as
rchimeds, who asked for a place to stand on, that he might move the
orld, the assume the right to take possession of a place, though
t be in a land of shadows. They take for granted two things, whi
the most acute of them cannot prove. 1st That the faculties are ins-
ruments of the mind; whereas the mind and its faculties are the
ame; what we term a faculty being but a particular state or mode
f operation of the mind. For as matter destitute of figure, solidity,
ivisibility and extension, is a nonentity, so the mind aside from
s faculties has no real existance. The second position assumed is
hat there are division of the brain, called organs which are to be seen on
he periphrery, or surface of the brain under the skull, which developi
ments, or organs, impress their figure on the cranium or skull, in
n such a way as to be noticed on its exterior configuration.
Now all this proves to be a matter of conjecture. Take off the skull, and the
whole surface of the brain is alike in colour texture and configeration;
and yet we are gravely told that the organs are there, but has to be seen,
perhaps like the spirits in prospero cell, they only come at the bidding
of their master and are invisible to every eyeball else.
Escaping from all such entangled and conjectural explanations,
we may adopt the opinion of the ancient philosophers as near the
truth, as the unaided light of nature can conduct.

It was left for a more splendid manifestation of light, to clear away
the obscurities which so long rested on the human mind, in

eference to the nature and destiny of the spiritual principle in the
osom of man. The stream of light from heaven which pours its full
ide upon the intellect through the clouds of our natural ignorance,
as chased away the delusions which so long cheated the human und
standing, under the imposing semblance of true philosophy.

It does not become us to dogmatize on a question so dark, as that
volved in a view of the connexion existing between the mind and the
ody. That there is a union of an intimate tie, admits of no dispute; that
body perishes, after a laps of a few revolving years, we see every day
alized; and that the mind will exist, independent of the body, beyond
e narrow circle of time, though rationaly to be infered from the
eure glimps of nature, is clearly announeed to us by revelation.

Let us here rest satisfied, and enter directly upon the discussio
the influence of the mind in producing changes of sensation and
tion in the body. Coequal with the first mental emotions which
experience, is the agency which the mind exerts on the health of the
imal system. Although no very urgent or lasting feelings actuate
e youthful heart, yet even in the very primose season of juvenility,
e mind exerts an influence over the health of the body.

Whilest the budding faculties are unfolding and the unripend moral
inciples are maturing; whilest the glos of novelty is fresh on every object
ound; and the song of hope enchants the youthful step — even
this period of our earthly existance, do the agitations of the passion
duce dangerous attacks of disease. Thus an eminent surgeon in London
us that he saw the life a fine child fall a sacrifice to the emotion
ar, induced by her school mistress shutting her up in a dark cellar
ver with delirium, was the consequence; during the continuance
which her constant cry was, "dont shut me up in the cellar,,

But as the powers of the animal economy grow more vigourous
d the faculties of the mind increase in strength and extent of

eperation, the inlets are constantly multiplying through which the impressions which minister food for thought and emotion are conveyed. As we rise higher on the scale of human existance, we tread a more elevate pathway of mental and sensitive enjoyments, and at the same time enlarge the surface upon which the impressions of pain and sorrow are inflicted. As love and hatred, grief and joy, hope & fear, by turns sway our hearts so our bodies are affected with the alternation of depression and increased action, consequent to their variant agency.

Our refined mode of life has increased in a degree beyond present enumeration the amount of painful and pleasurable sensation, our minds are softened by the arts and accommodations of luxury, and agitated by the incessant play of those feelings which the multifarious events of life create; whilst our bodies are rendered more susceptive and excitable, from the tenderness suberin-duced by the soft indulgences to which civilized man is addicted.

At the same time art has multiplied her resources, and given us aid and facilities by which the evils induced by art are either prevented or repaired. Especially, has education clothed the mind with an offensive and defensive armour by which man is enabled to wage a successful warfare against many powerful enemies. Elevated as an intellectual being man becomes the Lord of creation, and the master over the lower principles of his nature.

The instinctive ferocity of the lion suffers no controlling principle of his nature to exercise a dominion over this king of beast. But it is the glory of man, as a moral and intellectual being, to say to his passion, "Here stay thy march; and hither though shalt come but no further."

The mind of a savage man approximates to the character of inferior animals. In his bosom a few strong passions have mastery. In obedience to the laws of self preservation, he pursues the chase; in accordance with the desire of repose, he throws his body recumbent, till awakened by the calls of hunger or the warwhoop, he rushes forward in pursuit of his game or dares the prowess of his enemy.

His folded up powers of mind, never open beneath the genial ray of education "His intellect is not replenished, he is an animal, only sensible in the pulse parts,, Yet at times the etherial spark derived from above, blazes forth enkindles the whole man.

My object is not to shew the effects of the passions on the language or exterior parts of the frame, these being within the appointed scope of the rhetorician and painter; but to indicate the operation of the mind either in its calmer exercises or more excited moods, upon the health of the animal system, Particular emotions not only have a general influence and agency on every part of the body, as an integral mass animated by the vital laws, but a special bearing upon certain organs.

Thus greate anxiety of mind not only impairs the appetite, and diminishes the general vigor of the system, but often induces jaudice & This particular reference of action to an organ may depend upon an acquired or constitutional tendency to a particular disease.

But when we reflect, that affections of the liver depress the mind in a singular degree, we will predive that there is a direct, however mysterious, reprocal influence existing betwen certain mental operation and different parts of the complex machinery of the human frame.

With these general remarks, I will pass on to a particular analysis of the kind and extent of action excited by different emotions of the mind, on the physical structure of man.

A calm and temperate employment of the intelectual powers will never impair the energy of the system. But a protracted and intense attention will, by interfering with the demands of the animal economy, by preventing exercise and making invoads on the nervous system, thus keeping up excessive vigilance, mar in a considerable degree, the equable excitement of the system.

There is a faculty of the mind of very operative and influential power, in health and in sickness; a faculty whose discursive flights at times transport

the soul into elysian, and at other times drag it down to the gloomy Acheron.
This capacity of presenting ideal scenes, of bodying forth the forms of things unseen and of gliding the distant landscape with the brightest sunshine of bliss, imagination. Its influence in helth we all experience; and its operation in disease is signally conspicuous. Through the potent agency of imagination; men of a melancholic turn of mind have supposed themselves affected with every variety of disease.

Hope is the next passion of the mind which I will notice, as having a very dominant controle over the action of animal life. This cordial of the mind diffuses its sweetening influence through the bitterest draughts with which the cup of life is dashed. Its cheering radiance is spread over the entained gloom of sickness. Its consolations refresh the weary spirit in the dark period of bodily languishment. It imparts a renovating energy to the action of the system in disease, which adds increased efficacy to the remidies administered.

But in one particular disease, hope itself becomes a most inauspicious indication. It has passed into a medical axiom, that hope springs eternal in the hectic breast. Its illusory blandishments ~~cheat~~ the poor consumptive patients of their misery, which might otherwise shroud their minds in the prospects of a certain death from their disease. It may have its consolations, but they are fleeting, and whilest hope fills the mind with the visions of returning helth, the reality of death is not prevented in the least. In a medical point of view, it has a very prejudical influence, in so elating the patient with an opinion of recovery, that the means are totally neglected, or so negligently employed at the period when they can avail any thing in arresting the progress of the malady, that unless his friends interpose and oblige him by their entreaties to call in medical advice, his life is inevitable consigned as a victim to the disease. Thus with the increase of hope in direct ratio to the onward march of the disease; the mind of the unhappy individual, like the sun sinking in the western sky, when the clouds which gather round his path are illuminated by his departing rays, spreads the colouring of hope over the last hour of life; and only when life has

heaved

heaved its last expiring breath, will the gay delusions of hope cease to play their part in the hectic breast.

Joy is the next emotion of mind to be contemplaited in its effects on the system medical point of view. In its most accumulated action. Joy has extinguished life suddenly as could a stroke of lighting. The aged door keeper of Congress fell down dead when told of the capture of Cornwallis. But joy when moderate, quickens the circulation, kindles up a glow of heat over the frame, and infuses strength into the limbs.

Both hope and joy are employed by the skillful physian in bringing about a return of health. Hope may be poured in full tide into the patients mind, but joy must be temperately employed as a curative measure. In other words the cheering influence of hope can never be injurious from excess of operation, but joy may overpower the frail system and hurry the patient by a sudden stroke of mental deliquium to the grave.

Love is next to be regarded by us in its action on the health of the animal structure. Love has been divided into benevolence and personal endearments, Benevolence diffuses a sober placidness over the frame, and is highly promotive of the heatlhy performance of the system. Personal attachments are of varied character; as the relation subsisting between the persons varies. The feelings of personal friendship are salutary in their operations. Parental love, especially in the mother, is one of the most powerful passions of nature. The Roman matron who died in her sons arms upon his return home from battle, after a report of his death, is a striking specimen of the overwhelming agitation it sometimes induces.

But the love between the sexes is most potent in its diversified agency on the system of both man and woman. Shakspeare's Viola is a good representation of what is experienced by a delicate and cultivated mind under the pent up influence of this passion. "She never told her love, but concealment, like a worm in the bud, feed on her damask cheek; she pined in thought. Man, whose mind alternately actuated by other interfering passions, such as love of money, ambition and love of pleasure, may escape the deteriorating influence exerted by love not.

ipprovated on the health. When moderate love is induced towards an object, whose heart
eats in unison with the emotion thus felt, where hope can animate the mind
with the prospect of a happy consummation, then instead of impairing, it invigor-
ts the actions of life. But disapointed love, where the soul is "sicklied o'er with
e pale cast of thought," often induces mania concumption and may other afflic
ve and dangerous diseases.

Jelousy, which results from ill-regulated love or which arises from a disingenous disposition
ting upon the passion of love, is a depressing and corroding feeling of the soul, it
a "greeny'd monster, that makes the food it feeds on," and produces jaundice des
sia and infuriated melancholy.

Anger is the last passion that I will consider, it is the most destructive emo
on which ever preyed upon the peace of the mind; which, in its diversified
orlings produces more misery in society than all the rest, and which has more
equitably quenched, with impetious violenence, the vital spark, than any other emotion
Anger is in short madness, it acts on the whole frame; the heart is roused into
iolent pulsation, the limbs are convulsively agitated, and augmented in vigor; and the
ervous system vibrates with electrick fire. Apoplexy &c. is the consequence, which
recipitates the unhapy individual into imediate death.

An Essay on Rheumatism

Presented to the Provost, Trustees and Medical Faculty of the University of Maryland for examination by W M Smith. a candidate for graduation

March 26th 1830

On Rheumatism

Of this disease there are two kinds, the acute and chronic; in the acute form, of this disease; it appears to be, an inflammatory nature; the causes which produce it are cold; applied to the body, when any way unusually warm; or, when one part of the body, is exposed to cold, and the other, kept warm; or, when the application of cold, is long continued; as, it is, when wet, or damp cloths, are applied to the body; these causes, may, effect persons, of all ages; but, the rheumatism, seldom, effects, either, very young, or, elderly persons; it most commonly, occurs, from the age, of puberty, to that of thirty five, or forty years of age; this disease, is frequent, in colds, and more uncommon, in warm climates; it most frequently, makes, its appearance; in autumn, and spring, it is less frequent, in winter; when the cold is long continued, and severe; it is very seldom, during the heat of summer. It may occur, at any season, if the vicissitudes, of cold, and heat, are frequent; these causes, may effect, persons, of any constitution;

but, most frequently, affects, those, of a sanguine temperament. this disease, is particularly distinguished, by pains, affecting the joints, for the most part, the joints alone; but, sometimes affecting the muscular system, any of two, the pains, affect the person, by shooting along the muscles, from one joint to the other, always increased, by the action, of the muscles; belonging to the joint, or joints, affected; the larger joints, are most frequently, affected. such, as the hip, and knees; it sometimes affects the shoulder, and elbows; the ankles, are sometimes affected, but the smaller joints, such, as those of the fingers, and toes; seldom suffer, from the effects of rheumatism. the disease, although, sometimes confined, to one part, of the body; only, yet, it may frequently be found, in many parts, of the body. when it appears in the cold stage, it is immediately succeeded, by other symptoms; as pyrexia. it is particularly attended, by a full hard pulse. the fever, is sometimes found, before the person is troubled, by pains; but more frequently, pains are felt, in particular parts; before any

symptoms of fever, appear. When, no fever, appears, the pain, is sometimes, confined, to one joint only; but, when, any considerable degree, of pyrexia, is present; although, the pain, may be, in one joint; it seldom happens, but that the pains, affect several joints, at the same time; but, for the most part shifting their place, and having abated, in one joint, become more violent in another; they do not commonly, remain long, in one place, but, frequently shifting, from one joint, to the other, the disease frequently remains, a long time, in this situation, shifting, from one part, to the other; the fever, attending, this disease; has, an exacerbation, about night; and, is most considerable, during, the night. from which the pains become more troublesome, the pain, is frequently made more violent, by being, covered, too closely; and causing more heat than necessary. joints often having been affected, for some time, commonly become red, and swollen, which

is painful, to the touch; the swelling, frequently relieves the pain. this disease, is, sometimes attended, with sweating; it occurs early in the disease; but, is seldom free, or copious, the sweating, frequently has a desirable effect, in relieving the pain. in this disease, the urine is found, coloured, in the commencement. it is without sediment; but, as the disease advances, and the fever has more considerable remission the urine, deposits, a lateritious sediment; when blood has been drawn, in this disease, it gives an inflammatory appearance. The acute rheumatism, though, it has so much the nature, of other phlegmasia, it differs from them all, that is, not having, a tendancy to terminate, in suppuration. this termination, almost, never happens, in rheumatism. but the disease, sometimes, produces, effusions of a transparent gelly like fluid, into the sheaths of the tendons. it rarely happens that the fever cont-

ions, to be considerable, for more, than two, or three weeks; while the fever abates in violence, if the pains of the joints, continue; they are less violent, more limited, being confined commonly, to one, or more joints. when the fever, attending rheumatism, has entirely ceased; when the swelling, and particularly the redness, has disappeared; but when the pains, still continue, to affect certain parts, which remain stiff; which feel uneasy upon motion, or is affected by change of weather; then it may be called, chronic rheumatism. as it continues, for a very long time, the distinction, between the two forms, of rheumatism; are not always marked. when the pains are still ready to shift, their place; when they are severe in the night, also attended, with some degree of fever; and with some swelling, and particularly, redness of the joints; the disease, may be considered, to be partaking, of the acute form. but, when, there is no degree, of fever, remaining; when the pained joints, are without redness; when they are

cold and stiff, when they cannot be made to sweat; or, when, while a free and warm sweat is produced; it is clammy and cold, on the pained parts, and when especially, the pains of the joints, are increased by cold; and relieved by heat, applied to them; the case may be considered, to be of a chronic form. this form of rheumatism, may effect, different joints, et, seldom effects those joints, which are surrounded, by many muscles. and those, of which the muscles, are employed, in the most constant, and vigorous use. such as the vertebra of the loins. this affection is called lumbago. violent strains, and spasms occuring on a sudden, and violent exertions bring on rheumatism, which at first partake of the acute form. but soon become, chronic. with respect to the proximate cause, of rheumatism; there has been various opinions. it has been imputed, to a particular acrimony; with respect to the proximate cause this is thought to be impossible. however, a disease of a rheumatic nature, may be produced, by an acrid matter, applied to the nerves.

a rheumatic affection, may arise from a carious tooth. it has been said, the proximate cause of rheumatism, has been supposed to be, a lentor in the fluids, obstructing the vessels of the part. this opinion does not appear to be correct. it is more properly thought, to be the same, with that of other inflammations, not depending, upon direct stimulus; in the case of rheumatism, ~~it is thought~~ it is thought the most common remote cause. that is cold applied operates especially upon the vessels of the joints, from those being less covered by cellular texture, than those of the immediate parts, of the body of a limb. it is also supposed that the application of cold, produces a constriction, of the extreme vessels, on the surface. and at the same time, an increase of tone, or phlogistic diathesis. in the course of them, from which arises, an increased impetus, of blood; and at the same time, a resistance, to the free passage of it. consequently inflammation and pain. the cause of rheumatism, appears to be, analogous, to that, of inflammations

depending, on an increased afflux of blood to the part, while exposed to the action of cold. there seems to be also, in the case of rheumatism, a particular affection of the fibres of the muscles, the fibres appear to be, under some degree, of rigidity; therefore, less easily admit, of motion and pain, is immediately produced, upon exertion. It is an affection of those fibres, which give rise, to the propagation, of pains, from one joint to another. the pains are more severely felt, in the extremities of the muscles, terminating in the joints. the affection of muscular fibres attending rheumatism, seems to explain why, strains, and spasm, produces rheumatic affections; and shows, that with an inflammatory affection of the sanguiferous system; there is also, in rheumatism, a particular affection of the muscular fibres, which has a particular share in producing the phenomena of the disease. in acute rheumatism, which does not arise, from direct stimuli; there is an inflammatory affection, of the parts; and a phlogistic diathesis, of the whole system. and upon these, is founded the method of cure.

The cure therefore, in the first place, requires an antiphlogistic regimen; and particularly, abstinence, from animal food, and all fermented liquors. the diet should be of the vegetable kind; and the plentiful use, of bland, diluent drinks; in the acute stage, of the disease, there is generally, more relief, from bloodletting, than any other remedy. the blood, should be drawn in large quantities, and the bleeding, may be repeated, in proportion to the frequency, fulness, and hardness, of the pulse. and to the violence, of the pain; the bleeding, should not be too copious, in the first of the disease. as to produce too much debility, for fear of producing, a slow recovery; and giving the disease, a chronic turn. to avoid that debility, of the system which general bleedings, are apt to occasion; the pain, may often be relieved, by topical bleedings. especially ~~[illegible]~~, when the swelling, and redness, have possession of a joint; the pain may be very certainly relieved, by such bleedings. but as the continuance of the

disease, seems to depend, upon a phlogistic diathesis of whole system, than upon the effect of a particular part; or topical bleedings, will not supply the place, of general bleedings; to take off the phlogistic diathesis prevailing in this disease, cathartics may be useful, if produced by medicines, which do not stimulate the whole system such as neutral salts; and which have in some measure, a refrigerant power. purging is not so powerful, as bleeding, in removing the phlogistic diathesis, and when the disease has become general, and violent, frequent stools, are inconvenient, and even hurtful. by the motion, and pain, which they occasion. in acute rheumatism, applications, to the affected parts, are of little service, fomentations rather aggravate the disease, in the early state. but rubefacients and camphor, are frequently effectual, in relieving the pains. blistering, applied to the pained part, may be effectual, in removing the pain from it. they are of little service, only when the pains are much confined

to a particular part. after some general bleeding, to take off the phlogistic diathesis, sweating may be used, advantageously; sweating, provided it be used at the proper after the bleeding, has effectually reduced arterial action, and proves a valuable remedy. blisters are injurious, when the system, is in a high degree of fever. opiates, except, when they are directed to produce sweat, always prove hurtful. in every form of this disease, bark, sometimes, may be employed, in cases, when the phlogistic diathesis, has been much abated. and, when the exacerbations, of the disease, are manifestly periodical; with considerable remission interposed. calomel and other preparations of mercury are useful, in the chronic rheumatism; in the chronic form, it is necessary, to restore the activity and vigor of the vital principle, in the part. the remedies in this form of disease, are either, external, or internal. the external are the application of heat, by keeping the part well covered, with flannel, and

by supporting the heat, by either a dry, or humid form, the diligent use of the flesh brush, or other means of friction the application of electricity in sparks, or shocks; the application of cold water, by effusions, or immersion; the application of essential oils, of the most warm, and penetrating kind. the application of salt or brine. the employment of exercise, either of the part itself, so far as it can easily bear it, or the whole body, by riding. and many other modes of gestation. cold water, applied in the form of a shower bath, if it does not produce chillness; but if succeeded by a pleasant glow, on the skin; has been found, very useful, in chronic rheumatism. it gives tone to the skin, stomach, and whole system. bandaging the whole limb, or part, with flannel, rollers, moderately tight, proves very useful. it gives support to the muscles of the part, also, aids the circulation, in them. prevents the sensation of fatigue, and renders to them lost tone. it also aids, in producing transpiration; the internal remedies,

are essential oils, drawn, from resinous substances; such as turpentine, such oils as guiac: volatile alkalies, salts, these are other medicines directed, to produce sweat; calomel and other preparations of mercury in small doses for some time continued have been used with success —

An essay on the Physiology of the Liver presented to the Provost, Trustees, and Medical Faculty of the University of Maryland for examination, by Robert C. N. Grymes a candidate for graduation, March 20th 1831.

I deem it almost unnecessary to repeat a truth so obvious to every one viz the importance of that branch of Medical Science which is called Physiology, to every individual it is a subject of interest and gratification, but to the Physician it is a subject which combines interest with utility. It has been defined the science of Life, and in conjunction with Anatomy may be said to constitute the basis of Medical Science. It is by a knowledge of the body and its functions in health, that we arrive at correct ideas of Pathology, since this is nothing more than an aberration of these functions from their healthy condition. While we consider the many improvements which all the other branches of this science has undergone it is pleasing to see that this very important one has not been neglected, and although there are yet many dark points, still we are encouraged to cherish the sanguine hope that the time will come when all darkness shall cease and one universal light will be reflected through out the whole science of Medicine.—

On the Physiology of the Liver.

To the student of Medicine there is perhaps no part of the animal machine which affords a subject of more interest, none from its peculiarities more calculated to attract his observation than this viscus. It is situated in the upper part of the abdomen in the right Hypocondriac region, and is retained in its proper situation by reflections of the peritoneum called Ligaments and by the compression of the abdominal muscles. The general figure of the Liver is that of a concavo-convex body presenting a lobulated appearance which has induced Anatomists to divide it into five lobes these lobes are formed by the intersections of as many Sulci or fissures. Attached to the inferior portion of the right lobe is the Gallbladder, of a pyriform shape which serves as a reservoir for its secretion. The Liver is a very vascular gland, having besides the Hepatic Artery and Vena Cava, the Vena Portae its great peculiarity, taking its origin from all the Chylopoietic viscera, and distributing itself through out its whole substance, Physiologists have doubted from which of these the bile was secreted, it seems now however to be pretty generally allowed that the object of the former is to afford nourishment, while the latter

affords it its secretion. The nerves of the Liver are received from the Hepatic plexus, sent off from the great Sympathetic, hence may be accounted for those symptoms which so peculiarly characterize its diseases. By a minute inspection of the Liver it will be observed that it is composed of Myriads of granulations which have been called Acini, the nature of these bodies was long made a subject of controversy between Malphigi and Ruysch, the former contended that they were simple glands collected on the ramifications of the vessels, the latter that they were merely vascular whether it be the one or the other, it is well ascertained that there are the proper secreting parts, from whence small tubes originate for the purpose of carrying the secretion from them into the hepatic duct, by which it is taken into its receptacle the Gall bladder. Now that we have considered its situation its peculiarities and structure it is natural for us to inquire into its use. Considering its great size and at the same time how generally it is possessed being as common to red-blooded animals as the heart itself we cannot doubt but that it is of great importance in the animal system. Various opinions of its functions were entertained by the older Physiologists and indeed those of the present day do not seem to coincide on this point. Let it suffice then

for the present to observe that its immediate function is the secretion of the bile for which purpose as I before mentioned the vena portæ is seen ramifying throughout its whole substance, and now a question arises, whether is this secretion useful in the animal economy? It is contended by writers generally on this subject that it acts a very important part in the process of digestion. I will not presume to say that it is entirely useless in this process, but I am induced by very high authority, our distinguished professor Dr. Wells to consider it rather as an excremento-recrementitious fluid, serving this purpose only secondarily. We are told that by its action the lacteal system and alimentary canal are stimulated to perform their respective duties. In the consideration of this subject we are unavoidably led to view the operations of Nature, we are lia to ask the question why she so wise in all her works should thus have constructed man perfect in all parts with an incapacity of performing their individual functions without adventitious aid. Is it I ask like a law of nature that this digestive apparatus so beautiful and perfect in its structure should be incapable of performing its functions without the additional aid of a stimulating fluid, which stimulus is acting upon it as a cathartic (if you allow the expression) from birth to the end of existence?

But we are carried to disease to prove its utility. We are told that in the disease called Jaundice the alimentary canal becomes torpid, unable to perform its peristaltic motion, this is very true, but may not this be the effect of a sympathy with the general disease? And here I will add if this bile is of so much importance in stimulating the digestive apparatus, how is it that in this disease patients have been known to labour weeks aye months and yet the system recieve nourishment, are the Lymphatics idle all this time for want of stimulus? And if we go a step farther in Pathology we find a disease called Lyentery in which there is no discharge of bile and in which the peristaltic motion is unusually active.

In what then it may be asked does its recrementitious properties consist, I am disposed to think from the circumstance of the Choledic duct emptying itself so high up in the Alimentary canal, that it has an action in the process of chylification, for it is just here we see this process taking place. Far be it from my intention to consider this an unimportant gland, indeed although I do not consider it of such vast importance in the process of digestion, I am persuaded that it acts a part equally important to the system. Will it be asked in what this action consists?

seeing as I before said the Vena portæ, returning from the whole abdominal cavity charged with venous blood, the answer almost immediately suggests itself, the blood on its return to the heart saturated with Carbon and hydrogen is brought here in order that it may abstract from it those impurities, which are not only effete, but which could not remain in the system, without proving exceedingly noxious to it. By adverting to the fœtal economy I think we will have its functions more plainly developed, Why we are first led to ask is this great disproportion of viscera? Why such an immense gland for so small a body? will it be said that it is for the purpose of secreting bile to aid the digestive functions? may we not more reasonably conclude, that it acts a more important function, by depriving the blood of those impurities which it has been said to contain. Thus I am led to consider this a supplementary organ to the Lungs, that it assists them in effecting this change upon the blood, the importance of which change must be obvious to every one.

If we descend lower in the scale of animal beings I think we will see more plainly the truth of such a supposition, do we not see throughout creation, animals that have ~~large~~ lungs, have comparatively small

Livers and vice versa, hence it is that amphibious animals which spend a greater part of their time under water have immensely large Livers the functions of the Lungs being necessarily suspended while in this situation.
By experimentalists we are informed that in hybernating animals (which shut themselves up in their habitations during the winter season) the secretion of bile is always going on, it cannot be said in them it answers the purposes of digestion, since they take no food in the mean time, from these examples of comparative Physiology we draw the inference, that the Liver serves some important functions in the animal economy, which function I consider is the purification of the blood.

An

Inaugural Dissertation

On Gastritis

Submitted to the examination of the Provost,

Medical Professors, and Trustees of the

University of Maryland

At a public commencement held in the

City of Baltimore,

For the degree of Doctor of Medicine

On the 5th day of April 1830

By Howard M'Duvall

of Maryland

" Resta principiis sero medicina paratur

Cum mala per longas invaluere moras

Gastritis

Inflammation of the stomach, is divided by Cullen, into Two kinds, Phlegmonic, and Erythematic, The first he says may be seated in the nervous coat of the stomach. The second he observes is always seated in the villous coat and cellular texture immediately subjacent

Professor Potter, thinks this distinction unnecessary as one part involves another when inflamed, It affords me Great pleasure to agree with this distinguished Gentleman, in his opinion on thes subject.

It will not be my design in this essay to treat of Phlegmonic, and Erythematic, inflammation seperately, as it is of little importance in a practical (point)

point of view to distinguish one from the other, both requiring one and the same treatment.

Inflammation of the stomach, or what has been commonly treated of under the title of Gastritis, may be known by an acute pain in the stomach, accompanied with a burning heat. It is not always confined exactly to the region of the stomach, but extends as low as the false ribs, and often shoots to the back. It is not only much increased by any thing received into the stomach but even by the slightest external pressure. Those symptoms are also accompanied with frequent vomiting and hiccup.

The pulse in this disease, is small, frequent, contracted, more or less hard, and sometimes

intermitting,

intermitting. The Thirst is urgent and any thing taken into the stomach, to relieve the Thirst is soon rejected.

In Gastritis there is a more sudden and general depression of strength than in any other of the phlegmasiæ. It is so great sometimes as to threaten syncope, which in many cases actually takes place. The anxiety and anguish referred to the præcordia are very great and sometimes among the most distressing symptoms. The bowels are costive in this disease and are very difficult to be moved when the inflammation extends to them

There is no complaint with which gastritis is likely to be confounded. In cramps and flatulent pains of the stomach, the pulse is generally

(natural)

natural or nearly so. nor are these affections accompanied with the sudden sinking of the strength which attends gastritis. The increase of pain on receiving any thing into the stomach is much less remarkable in flatulent pains and cramps than in gastritis and in the former the great increase of pain on pressure is not to be observed. The hiccup is a more constant attendant on the latter complaint which assists here in distinguishing it

In spasm of the stomach, the disease most frequently confounded with gastritis, there is such a sense of contraction and suffocation that the voice is often suppressed, while in gastritis it is more free and the cries of the patient are often piercing. Sauvages observes that it is almost

impossible

impossible to distinguish gastritis from an inflammation of the epigastric muscles, and it also appears that Quarin agrees with this gentleman in opinion. As much as I respect the opinions of those gentlemen I must beg leave to differ from them. It appears also that the latter has fallen into an error of greater magnitude in saying that a diagnosis between gastritis and an inflammation of the epigastric muscles is of little importance. since the treatment of them is the same. Now the treatment is not the same, since in an inflammation of the epigastric muscles we trust more to local remedies. And in gastritis. the organ affected being of so much greater importance we are called upon to use the most powerful general means

(The)

The Practitioner by a little attention will be able to distinguish between those two diseases. In an inflammation of the epigastric muscles it is true the pain is increased on pressure as in gastritis but it is also increased in a greater degree by the motions in which the epigastric muscles, are concerned which is not the case in gastritis. There is also a marked difference in the pulse of one and the other In the latter the pulse is small as I have mentioned above, but in the former if the pulse is at all affected instead of being small and feeble we have in their stead a strong and full pulse as in most other inflammatory diseases. And also as it regards the irritability of the stomach there is no tendency to vomiting or very little at the

(most)

most which is always a most distressing symptom in gastritis

Such are the symptoms on which we place our chief dependance in distinguishing gastritis from those complaints which most resemble it. And when the symptoms mentioned are fully developed there are few diseases whose diagnosis is more easy. We must be pardoned here from not noticing the swelling of the muscles which may frequently be observed, as there is often some degree of fullness and tension about the stomach, in gastritis and therefore this swelling would be a deceitful symptom. Having enumerated all the principal diagnostic symptoms, I deem it unnecessary to dwell longer upon this part of the subject but shall proceed to enumerate the causes

producing

producing it. The causes of this disease have been rightly divided by authors into predisposing and exciting, Those persons who are peculiarly subject to other inflammatory diseases are alike predisposed to gastritis. former habits predispose to this disease It is remarked by an author that those of a thin make rigid fibres and a quick digestion are liable to inflammatory diseases. But as it is foreign to my purpose to dwell longer upon this part of the subject we may conclude by saying that Whatever tends to weaken or debilitate the organ also predisposes it to inflammation

In regard to the exciting causes of gastritis cold applied in various ways holds a principal place Most of the exciting causes of gastritis however

(are

are local irritation's applied to the stomach. There is no cause of this disease more frequent than taking cold liquors into the stomach in large quantities when the body is heated. Acrid matter received into the stomach especially when its mucous has been abraded or so changed as not properly to perform its office may excite gastritis. Those substances however that are most acrid to the taste are not the substances that occasion most irritation in the stomach. The strongest spices are often taken into the stomach without inconvenience while on the other hand the most insipid matters frequently affect it powerfully. Substances which affect the taste strongly to a certain degree irritate the stomach and if used very freely by those who are (strongly)

strongly predisposed to gastritis particularly such as have lately laboured under this complaint they may excite it It is not at all suprising that we should find the exibition of drastic Emetics and Cathartics producing the cause of gastritis as they possess the peculiar power of irritating the stomach

To these causes of gastritis we may add that there is a numerous class of poisons which seem to act by exciting inflammation and ulceration in the stomach. But the limits of this work will not permit me to enlarge upon this division of causes I will therefore proceed to enumerate but a few of them. Among the most important of which are Corrosive Sublimate, Arsenic, muriatic, Sulphuric and Nitric Acids.

(There)

There are certain articles of diet that irritate this organ during digestion. Animal food occasions more irritation than vegatable and young animal flesh more than old as the young is more difficult to digest. That irritating and intoxicating liquors have a tendency to excite gastritis I believe is generally admitted. Fermented liquors freely used often excite it in those who are local predisposed and a very small quantity is sufficient to occasion a relapse. Acrid matters generated within the body may give rise to gastritis as sometimes happens in ulcerous affections of the fauces and asphagus.

There are few things which apply a stronger irritation to the stomach than over distention, when an unusual quantity of food of difficult digestion

(is)

is received into the stomach so as to keep it distended for a considerable length of time inflammation of the organ may be the consequence

There are various mechanical causes that produce this disease. A blow on the region of the stomach wounds in the stomach or neighbouring parts and the pressure of the ensiform cartilage when it is luxated or fractured so as to press on the organ is said by respectable authors to have produced this disease

It may also be excited by the various causes of sudden plethora, such as the suppression of hemorhages or other habitual evacuations. Inflammation of some neighbouring part may spread to the stomach, so as to produce this disease, (particularly)

particularly that of the oesophagus and duodenum.

Such are the principal exciting causes of gastritis, There are some others which might be mentioned but I think it unnecessary, and shall therefore proceed to a more important part of the subject. But before entering upon the more important part, viz. the treatment I deem it essential to make a few remarks on the prognosis,

In foretelling the termination of this disease, it becomes us to pay particular attention to the symptoms, as they are to the practitioner, what the maps and charts are to the navigator. There is but one termination which can be looked upon as favourable, and that is resolution, which is known by the general mildness of the symptoms, and particularly

particularly their yielding to the Proper treatment.

But on the contrary when the symptoms run high and suffer little or no remission on the use of bloodletting and other means for moderating inflammation, we have great reason to fear an unfavourable termination of this disease

There are however other terminations of this disease, such as suppuration and gangrene, It has also been remarked by an author, that gastritis terminates in scirrus and cancer, If this celebrated author's opinion had been the reverse, I would have readily subscribed to it.

Suppuration may sometimes be looked upon as a favourable termination when ever the abscess opens into the cavity of the stomach, but on the other

(hand)

hand an unfavourable issue may be expected. A tendency to suppuration which is a rare termination, may be known by the symptoms continueing without any considerable remission, and at the same time with no great degree of violence for one or two weeks or longer.

When an abscess is formed it may be known by a considerable remission of the pain, generally preceeded by rigours. But there is a sense of weight and anxiety about the precordia which harass the patient very much. The frequency of the pulse is at first abated, but soon after it is again increased, with frequent cold shiverings and with marked exacerbations in the afternoon and evening, followed by night sweatings, and other

(symtoms)

symptoms of hectic fever. These at length prove fatal, unless the abscess open into the cavity of the stomach, the pus be evacuated by vomiting and the ulcer soon heal

The termination of this disease in gangrene is always fatal. The tendency to gangrene may be suspected from the violence of the symptoms not yielding to the remedies during the first days of the disease. And when gangrene has taken place it may be known by the remission of the pain, the pulse at the same time becoming more frequent and feeble, and the anxiety and debility increasing, with cold, clammy, and partial sweats

Dr. Wilson remarks, that in visceral inflammation

(where)

where the gangrene occupies but a small part of that which is inflamed, the pain often continues to the last. In these circumstances it is more difficult to ascertain its presence, this may generally be done however, by an attention to the other symptoms

Dr. Wilson farther remarks besides the terminations which gastritis has in common with the other phlegmasiæ, it seems sometimes to prove fatal in consequence of the extreme irritation of the system which it occasions." From the sensibility of the stomach, and its communication with the rest of the system, And Dr. Cullen, observes it would seem that the inflammation of this organ, by whatever causes produced may be attended with fatal consequences in particular, by the great

(debility)

debility which such inflammation, suddenly produces, it may quickly prove fatal without running the common course of inflammation." A respectable author says that gastritis, induces sudden death with convulsions, before any of these terminations can take place

General convulsions are mentioned by many as a frequent symptom of gastritis, and that they proceed sometimes from the presence of inflammation in so sensible a part cannot be doubted; for this we have the authority of respectable authors, but in by far the majority of cases in which they supervene, the disease, has arisen from poisons received into the stomach, and the convulsions are more frequently the consequence of these being (taken)

taken into the mass of blood, than of the gastritis, which they occasion. The combination of gastritis, and worms, in children may also have contributed to strengthen the opinion of convulsions being a symptom of the former complaint, With these remarks on the prognosis of gastritis I shall proceed to the treatment of this disease

The treatment of gastritis, is to be ~~be~~ first attempted by blood-letting, the blood should be taken in small quantities and the operation frequently repeated, when the pulse rises, We are not to be deterred from bleeding by the smallness of the pulse for after bleeding it commonly becomes fuller and softer

It is said that the neutral salts, in solution can be longer retained on the stomach than any other (purgative)

purgative which might be tried in every case of this disease but generally the stomach is so irritable that no purgative can be retained on the stomach, sufficiently long to have the desired effect and we have to purge chiefly by means of active injections. The patients drink should be very mild such as simple water, a thin mucilage of gum arabic, sweet milk diluted with water, and these should be given in small quantities at a time. The warm bath, is used in this disease with very great advantage after bleeding, the patient should be repeatedly immersed in it when the symptoms require it. If it should not be convenient to use the bath we must substitute warm fomentations which should be applied to the whole of the abdomen

(Blisters)

Blisters should be used after the inflammatory symptoms have been subdued by the remedies above mentioned.

Local blood letting is recommended by authors in this disease but I think general bleeding is to be prefered when the system will bear it. Diaphoretics have been found useful in the second stage of gastritis by their causing a determination to the surface they relieve the internal organ. Those found to answer best in this disease, are the saline mixture, given either in the state of effervescence or after it is over, mercurial friction are said to be very useful diaphoretics in this disease

Opiates in what ever manner exhibited, are very hartful during the first days of this disease, but when its violence shall have abated, and when the violence

(of)

of the pain and vomiting, recur at intervals only, Opiates given in glysters may be cautiously tried and sometimes have been employed with advantage. The bad effects of opium in this disease, does not proceed from any local action on the inflamed parts but from its increasing the vis a tergo.

When this has been sufficiently reduced, and there is consequently little or no hardness remaining in the pulse opium is employed for the purpose of allaying pain and irritation

When this disease arises in consequence of poisons taken into the stomach, it is necessary to promote vomiting by the use of mild mucilaginous and oily fluids, till there is reason to believe that the offending cause is removed. While these promote

(vomiting)

vomiting they defend the stomach against the irritation of its contents. If we are acquainted with the antidote which corrects the noxious quality of the poison, immediate recourse must be had to it. If the poison be corrosive Sublimate, we should make use of the white of eggs, and if it should be Tart Antim. the yellow bark should be given &c. A tendency to suppuration in this disease, is to be obviated by the remedies I have mentioned. After a certain duration of the disease it cannot be prevented by any means whatever and when actually begun must be left to nature; the business of the physician being only to avoid all irritation

A tendency to gangrene can be obviated in no other way than by the means suggested (above)

above employed early in the disease and when it does actually supervene admits of no remedy.

Finis

An

Inaugural Dissertation

on

Hepatitis

Submited to the trustees and faculty of physic in the

University of Maryland

For the degree of Doctor of Medicine by

Wesley Conaway of Maryland

March 20th 1830

Perhaps there is no disease in the whole nosology to which the practitioner is more frequently called than Inflamation of the liver, and about which there is some difference of opinion as respects the manner of treatment. There is no organ in the body whose functions are more easily disturbed than the liver, it is the largest gland in the body, being more voluminous than the lungs when in a state of expansion: it serves as a point of termination for the blood of the abdominal viscera in the same manner as the lungs do for the general circulation; and from its great volume there is no doubt but that it is appropriated to some other purpose than merely to secrete the bile; for it is discovered in the embrio before any of the other viscera and in the foetus it is much larger in proportion than it is after birth: and why should it be so if it were not destined to perform some ~~im~~portant function in the foetal state. But it is not my intention to enter into the general utility of this organ only to express a belief that at some future period it will be discovered to perform some other function than merely to secrete the bile

The connection between the brain and liver is observed by the practitioner in all derangements of the functions or structure of the bilary aparatus; none presents to us a more regular diagnostic than pain in the head or some other mental derangement attending the disturbance of this important organ; and vice versa when the head receives a blow, disturbance of the liver frequently follows and sometimes finally terminates in an abcess as has been sudgested by M. Biot an eminent military surgeon. A very intimate connection appears to exist between the liver and lungs by nervous communication, this communication is performed by the par vagum and sympathetic; the par vagum supplying the lungs and stomach, and sending branches to the semilunar ganglion formed by the sympathetic, and this ganglion supplying the liver, and they holding correspondance, in this way the lungs become affected.

When we behold the size of the liver in the foetal state as well as in the adult and examine the singularity of its circulation compared with the other organs of the body, its extensive vascular connection, the functions it is intended to perform and on the due performance of which depends so much and in so great a degree the perfect health of the body we are at once

compelled to admit that it is destined to hold a commanding influence over every other part of the body; and that when it is out of order, discord and want of agreement attend on every operation of the human system.

Perhaps there is no disease to which the human system is more subject than this; and if permited to run its course will soon involve its important and adjacent parts either by immediate contact or sympathetic connection; therefore it calls for quick and active remedys to retard its progress; and if not early arested it will be insurmountable by human art. This disease like most other inflamatory affections is divided into acute and chronic; but it is my intention only to treat of the acute form. Some controversy still exists concerning the part; the peritoneum agreable to some able men is most liable to the acute form; If it be so there is no doubt but the disease may occasionally extend to the substance of the liver.

The causes which involve the liver into disease are very numerous, cold is the most frequent of other inflametary diseases, but not the most frequent of this, for it is (like all other abdominal diseases) a disease of warm climates, however it is thought that

cold may from its violent and sudden effects so debilitate the the organ that it will be incompetent to recover itself without medical aid; not by acting directly, but indirectly in producing a sudden change in the temperature of the system, by driving a greater quantity of blood to the large vessels of the internal organs, and they at last become disabled to relieve themselves of this unusual supply of blood finally congestion takes, creating an instability in the parts, and if not removed, inflamation and fever will follow. Sudden vicisitude of weather from heat to cold will frequently produce this disease, not being able to withstand the shock consequently lies prostrate from the injury done by the cause. Heat is the most frequent cause of this disease in hot climates, and it sometimes very speedily runs into suppuration: Dr Clark relates a case in which suppuration followed the inflamitory form in five days after the disease took place. Another very frequent cause is marsh effluvia; it makes a great and sudden impression upon the liver, impairing the brain and nervous system, consequently producing congestion, and if not removed, disease finally takes place; but if prompt and proper means be employed in the first instance the organ will very probably be restored without much difficulty

Fear acting with some energy may so impair the organ as not to be able to recover itself without medical aid. It is said by some that anger increases the secretion of bile and fear has an opposite effect, one producing an increased the other a diminished secretion; therefore its function is deranged in both cases. Partial applications of cold or wet when the body is heated or overfatigued by violent or unaccustomed exercise will be found very frequently to be the exciting cause of this disease, blows or external injurys have been known to produce it—

The Symptoms which characterize this disease are, pain in the right hypochondriac region, shooting to the back and shoulders, generally very acute, and increased by pressure, white and dry tongue, hurried respiration, and difficulty of lying on the left side, irregularity of the bowels and cough. The cough may be produced by the inflamation extending to the diaphragm and spreading along the pleura. Difficult respiration increases pains though it does not always produce cough, and very frequently this last symptom does not appear till the second or third day of the disease.

This disease begins either in the membranes or substance of the liver, but to the practitioner it makes but little difference which

part it begins in, for it is abundantly obvious that in a large majority of cases the latter structure becomes quick and in a great extent involved in the disease, and the symptoms which characterize the substance of the liver are nearly the same as when its membranes are diseased but in addition to them some degree of swelling is to be felt externally, the pain is more obtuse than when the capsule is affected, the urine is of a deep saffron colour, the tongue is coated with a yellow fur the pulse frequent hard and sometimes full, the skin hot and dry, frequently accompanied with nausea and vomiting, generally in the morning after rising: not from inflamation but from irritability of the stomach, wandering pains in the floating viscera, and slight pain at the end of the sternum, when pressed upon.

The manner of treating this disease is nearly similar to the treatment of all other inflamatory diseases; when it is of cold or temperate climates and when confined to the investing membranes of the liver, it is to be conducted upon the same principal as inflamation attending the peritoneal covering of the other viscera Bleeding is the most important remedy and should be carried to a full extent, the cessation of pain should be considered the

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measurement of the quantity of blood to be extracted; the first bleeding should be large enough to make a sensible impression upon the severity of the disease. The employment of magnesia in small doses is here of essential benefit to correct the acidity of the stomach; this is then to be followed by a dose of calomel, giving the liver time to free itself of its confined secretions; then if pain and inflamation continue bloodleting should be repeated as often as is necessary, and the purgative treatment continued with neutral salts till the patient feels not a vestage of the disease. If the debility should be too great for general bloodleting, leeches and cuping should be used, the number of leeches and the quantity of blood to be abstracted, are to be according to the state of the patient. Our reliance for a recovery in this disease depends upon the active influence of the antephlogistic means. Calomel is an important remedy in this disease, it admits to the bilary ducts their depraved secretion which is confined by the inflamitory state of the liver. Purgatives appear to lessen inflamitory action by removing the torpor which exists in the system and lessening the quantity of blood by evacuating a serous fluid and thereby promoting the bilary secretion. When the bowels are obstin-

ately costive gamboge or aloes act very well. In ordinary cases cooling purgatives, as the saline preparations are preferable to any other. After bleeding and the prima via have been cleared out, and fever and dry hot skin continue, diaphoretics should be employed, they aid the system in relieving itself of noxious principals, assist nature in casting off the cutaneous exhalations which are not fit for the purpose of the animal economy; which if retained would be a source of morbifick irritation. Blisters should not be applied except in a state of debility where bloodletting cannot be resorted to; in this case they may be applied with great advantage, but they should be kept open for sometime and if they should heal too promptly reapply them. At the time these remedys are employed, particular attention should be paid to diet all aliments of an indigestable nature should be dispensed with, no strong meats, no preparations of diet that have in its composition fatty or oily substances, avoid all spirituous liquors, and pure country air should be had

Suppuration will frequently follow after all medical aid has been resorted to, it may ultimately prove fatal or it may not: the symptoms which characterize this state of the disease are

cipation of pain, chill hectic flushes night sweats and diarrea. If the abcess point towards the diaphragm it will produce cough and difficult respiration, by preventing the natural expansion of the chest; if towards the stomach considerable of gastric disturbance will take place, producing irritability and finally vomiting to an alarming degree; if it should burst within the walls of the abdomen, and there be a large quantity of matter deposited in that cavity, and the patient much debilitated it will very probably terminate fatally. Adhesions sometimes form between the liver and intestines (principally the colon) and the matter is poured in that intestine and discharged by stool which is a very favourable termination: Very frequently an adhesion to the peritoneum takes place, and an external abcess makes its appearance which is favourable; it should then be opened by art, for in most cases perhaps if left to the spontaneous efforts of nature the constitution would be destroyed before the discharge could be affected. The evacuation of nature should be followed by nutricious diet, pure fresh air, Cinchona, mineral acids, and other powerful tonics should be promptly exhibited

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An Inaugural Dissertation

on

Hepatitis

Submitted to the Examination of the

~~Reverend William Myath. S. T. D. Provost~~

Provost:

The Trustees and Medical Professors of the

University of Maryland.

For the Degree of Doctor of Medicine

on the day of April A. D.

One thousand eight hundred and thirty.

By

John Henry Sellman,

of Annapolis, Md.

Hepatitis.

On Inflammation of the Liver

The inflammation of the Liver is by Cullen divided into acute and chronic,

Of the symptoms of acute hepatitis,

Like other inflammations, hepatitis makes its attacks more or less suddenly, the patient sometimes complaining of a tightness about the precordia, accompanied with a degree of anxiety and fever, for some time before the symptoms peculiar to the complaint shew themselves; at other times the pain in the region of the Liver being among the first symptoms. In either case the accession is frequently attended with some degree of cold shivering.

The chief diagnostic symptoms of this complaint are, the seat and kind of the pains which attend it.

The acute hepatitis is almost always attended with a pain in the hypochondrium, which is sometimes shooting, accompanied with a sense of tension in the part; In some cases it is constant and severe, in others deep seated and obtuse. The pain however is not confined to the region of the Liver; It extends to the breast, clavicle, and shoulder of the right side, and in the last it is often more acute than in the seat of the disease. The pain of the hypochondrium is increased on pressure: when the pain is much increased on pressure, the anterior part of the Liver is the chief seat of the disease. But when

the pain extends to the clavicle and chest, the convex part is most frequently affected. When the inflammation attacks the left lobe, the pain is often in the left shoulder. But when the inflammation attacks the right lobe, the pain is in the right shoulder. It is generally most severe when the patient lies on the left side. The pain of the side, as well as the shoulder is often increased during inspiration, which is impeded by it. As might be supposed, it is most so when the parts lying nearest the diaphragm are inflamed: It is in these cases that the cough which accompanies this complaint is most severe, and that hiccup most frequently supervenes. The cough is generally short, dry and frequent and the hiccup, which is never a favourable symptom, is sometimes so violent that it almost interrupts respiration.

When hepatitis is attended with cough and difficulty of breathing, it may be perceived how readily it may be mistaken for Pneumonia, but it may readily be distinguished by the pain in the former extending up in the shoulder; by the sallowness of the countenance; by the cough being unaccompanied by expectoration; and by the less degree of dyspnoea. The heat and pain not being increased upon taking any thing into the stomach, its being able to retain whatever liquids or medicines are thrown into it, without the immediate rejection of them, and the less prostration of strength, will distinguish it from gastritis. Hepatitis may

be deceived from spasm on the gall ducts by there being no nausea; by the pain being permanent; by the pulse being one hundred and upwards in a minute; and by the patient always preferring to keep the body in a straight quiescent posture; whereas the greatest ease, when there is spasm on the gall ducts, is obtained by bending the body forward on the knees.

The patient lies with difficulty on the left side; There is nausea and sickness and often a vomiting of bilious matter; The intestines are generally inactive, and the stools shew a deficiency of biliary secretion, or at least of any intermixture of it with them; the urine is of a deep saffron colour, and small in quantity; There is loss of appetite, great thirst, and costiveness, with a strong hard, and frequent pulse, and sometimes intermitting. The tendency of hepatitis to resolution, as of other similar complaints, is known by the general mildness of the symptoms and their yielding to the proper remedies, particularly by there being little dyspnoa, cough, hiccup, vomiting, oppression or debility. As in other febrile diseases, there are certain symptoms which frequently attend the favourable termination of hepatitis, amongst these are hemorrhagies, particularly those from the nose and hemorrhoids. It is sometimes terminated by sweat, which, when symptoms of jaundice attend, often stains the linen of a yellow colour. As soon as suppuration takes place, the pain remits, and there is generally a sense of weight and pulsation in the region of the Liver, the former being

increased by lying on the left side. These symptoms are attended with frequent and irregular shiverings, and at length with hectic fever. In many cases there is an evident tumour, and fluctuation may be readily felt. Hepatitis though very rarely, terminates in gangrene. The tendency to gangrene is known by an unusual violence of the symptoms, rapidly increasing, and not yielding in any measure to the proper remedies. When gangrene has actually supervened, the inflammatory symptoms subside suddenly, cold sweats supervening, and the pulse becoming weak and fluttering, with constant hiccup and cold extremities. There is generally a black matter rejected by vomiting, the stools being unusually offensive and of a dark colour; and fits of syncope frequently precede death, which is never long delayed. Schirrus of the liver has generally been ranked among the terminations of hepatitis

Of the remote causes of acute hepatitis

The remote causes of hepatitis are external violence from contusions or falls, and especially those which have occasioned a fracture of the cranium, Certain passions of the mind, violent summer heats. violent exercise, Intermittent and remittent fevers. Cold applied externally, or internally; and therefore in many cases the same causes which produce pneumonic inflammation, produce hepatitis; and whence also the two diseases are sometimes joined together.

Of the treatment of acute hepatitis.

In acute hepatitis, the mode of treatment differs in no material

point from that which we pursue in other violent cases of phlegmasia. As the disease is obstinate and unusually rapid in its progress towards suppuration, it calls for practice of great energy. Blood letting, in particular, must be carried, in a given time, to an extent not common, and scarcely warranted in other complaints. While the pulse remains full and strong, and the pain in the side pungent, blood letting is the only remedy on which we can rely. In the mean time, however, it should be aided by copious purging with calomel, quickened in its action by Jalap and a strong infusion of senna. The infusion of senna, with nearly as much of Glauber's or Epsom Salts as it will hold in solution, constitutes also an excellent purge. While these operations are going forward, cups or leeches, or both, should be liberally applied to the region of the Liver, and a large blister laid on the same, as soon as the febrile action is sufficiently reduced. But if blistering be resorted to at too early a period, besides standing in the way of topical blood letting, it can scarcely fail on other grounds to be productive of mischief. These remedies, connected with a rigid enforcement of the antiphlogistic regimen, constitute our reliance in acute hepatitis. After the inflammation has been sufficiently reduced, it will be the safest practice to remove the disease entirely by a gentle mercurial ptylism, to be continued for some time. Fomentations are more generally employed in hepatitis than in most of the phlegmasiæ,

and are often attended with considerable advantage. A large quantity of any mild warm fluid received into the stomach, is often found more effectual than external fomentation. After the inflammatory symptoms have subsided, the strength of the patient is to be restored by an invigorating diet and wine; and as soon as they can be employed without the danger of a relapse, by tonic medicines, for there are few complaints which leave behind them more languor and debility than hepatitis. It is also very readily renewed, so that it is necessary for some time after the disease is removed, to pay particular attention to diet, and to avoid the various exciting causes of the complaint above enumerated.

Of the Symptoms of Chronic Hepatitis.

The Chronic Hepatitis very often begins with symptoms of indigestion. The appetite is irregular, and after eating, the patient is troubled with acidity, flatulence, and a sense of fulness in the Stomach, the countenance becomes pale and yellowish, swollen, sometimes bloated, and the eyes dull and languid. There is a sense of uneasiness about the hypochondria, sometimes attended with shooting pain, which frequently extends to the clavicle and right shoulder; the pain of the hypochondria and sometimes of the clavicle and shoulder, being increased by pressure on the region of the liver. The pain is sometimes confined to the right shoulder, and sometimes felt chiefly when the

shoulder is pressed, sometimes it is rather an itching than pain. During the course of the disease the patient often complains of pains of various kinds, either dull or acute, frequently attended with a sense of weight or fulness in the epigastric and hypochondriac regions, and with some degree of hardness and tumour of these parts, particularly of the right hypochondrium. As in other cases of indigestion, there is much languor and lassitude, with an inclination to sleep. The sleep, however, is seldom refreshing and often interrupted by dreams. The patient becomes melancholy and fond of retirement. The State of the bowels is very variable, being sometimes costive, sometimes affected with diarrhœa. The stools are at one time of an ash colour, at another yellow, or almost black, and very fetid.

They are sometimes frequent, small and mucous, the abdomen at the same time being tense and hard. The pulse in many cases undergoes little change, being only more feeble and languid than natural. In some cases it is slower, in others stronger and more frequent. When there is much soreness, or pressure, in the region of the liver, the pulse is more or less hard, particularly in the evening. The tongue is generally foul, for the most part white and dry, and the gums often become harder than natural. The breathing is generally much affected. A degree of dyspnœa, accompanied with a dry teazing cough, sometimes comes on at an early

period, almost always in the progress of the complaint, the shoulders appearing daily more elevated. It sometimes happens that the dyspnœa is unattended by a cough, and more frequently that the cough is moist, the patient expectorating with difficulty, but experiencing considerable temporary relief to the breathing from bringing up a little phlegm or mucus, of which the matter expectorated in this complaint generally consists. Towards the termination it frequently assumes more or less of a purulent appearance. The pain of the hypochondrium is generally increased during the exertion of coughing. Lying on either side, particularly on the left, frequently occasions uneasiness, and the patient feels his complaint least when he lies on his back, turning a little to the right, with his shoulders gently raised. Acute pain, hiccup, and vomiting, are more rare in the chronic, than in the acute hepatitis. In the former, as well as in the latter, some degree of jaundice frequently appears. These symptoms, with more or less rapidity, gradually increase. Fever shews itself, particularly in the evening, which is soon accompanied with night sweats, emaciation, great debility, and fetid and putrid stools. In short, complete hectic comes on in consequence of the formation of one or more abscesses, which bursting where the least resistance is opposed, generally prove fatal. It sometimes happens as in the acute

hepatitis, that adhesions are formed between the liver and parietes of the abdomen, the matter pointing outwardly is discharged by the skin, and the patient often recovers. The chronic hepatitis sometimes runs its course in a short time. In other cases, it is protracted for months, or even for years. The chronic hepatitis is a less dangerous complaint than the acute, if it be not overlooked till a tendency to suppuration takes place. The prognosis is then the same, and collected in the same way, as in the acute form of the disease.

Of the causes of Chronic Hepatitis.

I need say little of the causes of this form of the disease, since the same causes produce both the acute and chronic. It would seem that the full sanguine constitution is most subject to the former, the exhausted and melancholic to the latter. It is supposed by authors that there is something in climate which predisposes to the acute or chronic hepatitis since we find the former chiefly treated of by authors who practised in Europe.

Of the treatment of Chronic Hepatitis

In Chronic Hepatitis venesection is essential; but must not be pushed to the same extent as in acute hepatitis. There exists, however, scarcely any complaint in the course of which so large a quantity of blood has been taken from the patient with advantage, as in some cases of that which we are now

considering. But, as the disease is chronic, such must be the remedies, gradually, but firmly and perseveringly employed. Here also the application of cups to the region of the liver is highly usefull; but the most important topical remedy is a perpetual blister; or, what is better still, a caustic or a seton. But in the treatment of chronic hepatitis our chief reliance is on a gentle but continued mercurialization. Should the system be likely to sink under this remedy, let it be discontinued, for a time, and then recommenced, and let this plan be steadily pursued, until every symptom of the complaint shall have disappeared. If the season be mild, and the febrile action very moderate, the patient may be allowed to take gentle exercise in the open air, But no one, under the influence of mercury, should ever venture out of his chamber in damp or cold weather. It is to a neglect of this precaution, that we are to attribute the frequent failure of that remedy, and the many injurious effects that occasionly result from the use of it. When exhibited under proper circumstances, there is no remedy more perfectly safe than mercury; nor is there any one more dangerous if used indiscreetly. There are cases of chronic hepatitis in which the propriety of employing mercury is doubtful, particularly where it is combined with putrid fevers and other diseases of much debility.

The use of Mercury in these cases has not been proved either to be hurtful or useless; from what has been observed in similar cases, practitioners have been afraid to make the trial. The good effects of mercury in hepatitis generally appear as soon as the mouth begins to be affected, and sometimes sooner. When much difficulty of breathing or pain occurs during the mercurial course as sometimes happens, even where symptoms had previously been very moderate, gentle cathartics and blisters may be recommended, or even blood letting, if it be judged necessary, without discontinuing the mercurial friction. When the foregoing symptoms are considerable, some advise the use of the mercury to be laid aside till they are removed. The fatigue of rubbing in such cases may be hurtful; but we have just seen, that mercury is employed with advantage even in the most acute hepatitis, especially when it acts as a cathartic. In some constitutions the exhibitions of calomel requires much caution. Another remedy which has acquired a high reputation in the treatment of chronic hepatitis, is the nitric acid. It may be given, in divided doses, to the amount of from one to three or four drachms in twenty four hours. A pleasant formula is, to make it into a Julep with mucilage of gum arabic, mint, or lavender water, and loaf sugar. To success in this disease, under any plan of treatment, the use of flannel next the skin, and an adherence to the anti-phlogistic regimen, is necessary. As a laxative and an

alterative, the long continued use of pills composed of rhubarb and castile soap, is highly recommended.

An Inaugural Thesis,

On

Phlegmasia Alba Dolens Puerperarum;

Submitted to the Provost, Trustees, and Professors of the University of Maryland, for the Degree of

Doctor in Medicine;

by

John A. Valiant.
of Baltimore.

March, 1835.

Dedication.

We are frequently indebted to our instructors, without having an opportunity offering, by which we might acknowledge our obligations; — when, however, one like the present presents itself, a heart devoid even of common affections could scarcely remain callous to the claims of those from whom we have received many friendships. I would be unnatural, indeed, did I neglect to tender to the Professors of my Alma Mater my warmest wishes for their health & happiness; and I would be no less ungrateful could I forget the many useful lessons received from my Preceptor Doctor Isaac Cole. As a tribute of respect, I beg him to receive this testimonial, until I can supersede it with one of more import.

Jno. A. Baliart.

Phlegmasia Alba Dolens Puerperarum; — the painful intumescence of the lower extremity incident to lying-in women: —

Although this disease must have existed as long as others which attend lying-in women, still it seems to have been only slightly noticed by any of the ancient writers. — The earliest treatise on the subject of which I have any knowledge — is one which was published by a Mr. Charles White, of Manchester, England, in the year 1784, whose ideas appear to have been revised by Dr. Gregg, of Gloucester, in 1792. — The disease appears to be one of no frequent occurrence. Mr. White states that out of 1897 women

delivered at the Westminster Lying-in-Hospital, five only were attacked with it; and out of 8000 who were delivered at the Manchester Hospital and at private houses, only four were afflicted with it. — We are told by Mr. White that, when not complicated with any other disease, he has never known it to terminate fatally, neither has he ever observed the skin to be so discolored as to point out the presence of local inflammation; on the contrary it is of a paler white than ordinary, which circumstance has induced him to name the disease Phlegmasia Alba Dolens Puerperarum. Some writers suppose the disease never to have terminated in suppuration; but Doctr. Lauce informs us that he has seen cases terminate in suppuration, as also in death.

This disease has been often

mentioned by the French writers under the name of "l'enflure des jambes et des cuisses de la femme accouchée", or that of "dépôt du lait", from its supposed cause; but often with so little accuracy, as to make it difficult to suppose what sort of swelling they meant to describe. — By the Germans it is usually called "oedema lacteum".

The puerperal swelling of the inferior extremities does not seem to depend upon the kind of labour which has preceded it; either with respect to its shortness or length of duration, as it occasionally happens after those which were easy, and those which were difficult; — nor does it depend on any evident peculiarity of the constitution, the corpulent and the thin, the feeble and the strong, being equally liable to it. Its appearance during preg-

nancy seems to denote a disposition to this disease; the swelling of the inferior extremities at that time being a totally different complaint. Doctor Ferriar is of opinion that Phlegmasia Dolens may exist independently of every circumstance regarding parturition; and he does not think its impossible to take place before delivery. —

Symptoms.

Before the appearance of any swelling, or painful sensation in the limb about to be affected, women become very irritable, with a sense of great weakness, and grievously depressed in their spirits, without any apparently sufficient reason, complaining only of transient pain in the region of the uterus, and from this the approach of the disease has frequently been foretold. After a short time they are seized, often very suddenly, with an extremely

acute pain in the calf of the leg, extending to the inside of the heel and then observing the course of the lymphatics, stretching up to the groin, along the internal part of the thigh, to the groin, occasioning a slight soreness over the lower part of the abdomen. The inguinal glands be=
=come affected, sometimes the external, which are perceptibly enlarged, indu=
=rated, and painful; — and some=
=times the internal, or both; — and, probably, also, judging from the symp=
=toms, those which lie at the bifurca=
=tion of the vessels at the loins. —
The whole surface of the swelled limb becomes insufferably tender to the slight=
=est touch or pressure, especially in those parts where the glands are seated; yet without any other apparent change, except that the skin is glossy, and of deadly paleness; a certain degree of which not unlike that of a chlorotic

or dropsical person, is spread over the countenance and whole body, every vein seeming to be scantily supplied with blood. When the pain has continued about twenty-four hours, the limb begins to swell, and the pain usually abates in proportion to the increase of the swelling; but from the moment of the attack, all power of acting with the limb is lost, every attempt to move it giving great torture, and a disposition to faint. Mr. White looks upon the swelling of the labium pudendi as an invariable symptom of the disorder, and ~~the~~ asserts, that when one side only is affected, the intumescence is confined so exactly to the labium pudendi of that side, that if a line were drawn from the navel to the anus it would be found never to go beyond that line in the smallest degree. We are told however, by Dr. Hale

that the swelling of the labium pudendi is to be considered rather as marking the extent, than as serving to characterize the complaint; and he positively denies that this particular symptom is always to be met with; for some cases had fallen under his care in which it did not exist. — On this point, as well as on most others relating to the nature and causes of phlegmasia dolens these gentlemen do not agree in opinion. There are, however, many varieties in the manner in which the disease commences, as well as in its degree and progress; but the glands and lymphatics of the limb are evidently the parts first and principally affected. In some cases the access of the disease is slow, and the symptoms less violent, hesitating, as it were, whether it should be formed or not. In these the pain is not only less severe, but diffused

over the limb, instead of being fixed on particular parts, and the swelling scarcely sufficient to draw attention.

The extremity being now swelled throughout its whole extent, appears perfectly or nearly uniform, and is not perceptibly lessened by a horizontal position like an oedematous limb. When pressed by the finger in different parts it is perceived to be elastic, little, if any, impression remaining, and that only for a short time. The swelling of the limb varies both in degree and in the space of time requisite for its full formation. In most instances it arrives at double the natural size, and in some cases, at a greater size than double. In lax habits, and in patients whose legs have been very much affected with anasarca, during pregnancy, the swelling takes place more rapidly than in those who

are differently circumstanced; it sometimes, in the former class of patients, arrives at its greatest extent in ~~twenty~~ four hours, or less, from the first attack.

This disease happens at no precise time after delivery, as it has come on at any period, from the fifth or sixth day to the third or even fourth week; but, most commonly, I think, between the fifth and tenth days. My friend, Doctor F. R. Sheams of this city, invited me to see a case which made its appearance on the evening of the fifth day after the birth of the child. His patient appeared to labour under considerable excitement; the pulse was extremely quick, but feeble, the heat of the body much increased, tongue white and clammy, and her countenance pale and dejected; her urine, which she voided in small quantities, was thick, and of a muddy colour, which appea=

ance diminished as the disease abated; the patient was inclined to be costive, the fæces being of a pale colour and clayey consistence; and the uterine discharges, possessed an unusually offensive smell, and unnatural appearance. This patient was afflicted with the disease but about ten days, when all symptoms of Phlegmasia Dolens disappeared.

Either or both the legs may be affected together or successively. When the latter is the case, the disease having remained for a certain time in one leg, and the symptoms being abated, the other has been suddenly and unexpectedly seized. When the symptoms have recurred with equal violence, and gone through a similar course. But the patients, having escaped the danger before apprehended, though disconcerted, fears the second attack, even if it be

more severe, better than she did the first. Should the second leg become affected, it cannot be supposed to be a metastasis of disease, the leg first affected remaining in the same state, and observing the same progress as before the affection of the second. — When only one leg is diseased, there are in some cases, occasional exacer=-bations, after apparently consider=-able amendment; and these may render it necessary to change the order of treatment, or even to return to that which was proper at the commencement.

After eight or ten days con=-tinuance, according to its lenity or violence, the more urgent symptoms of this disease begin to abate, but in many cases very slowly; the debility and oppression sometimes remaining for several weeks, or even months, as the constitution is naturally more

inert or vigorous. Though all the other symptoms be removed, the swelling may, and generally does remain for some time; and, in some very bad cases, the limb has never been reduced to its primitive size, or recovered its pristine powers of agility and firmness, during the patients life.

The constitution seems very much disturbed and enfeebled at the beginning of the disease, and unequal to the due performance of its common functions; yet after a certain time it seems to become local; for the patients appear partially to recover their health, and often menstruate regularly; — but even this change has seldom afforded the expected relief to the affected limb.

Respecting the pathology of this disease, it is extremely difficult to explain the cause of the alteration of

parts, or change of organization. Mr. White attempted to explain it, by supposing that an absorbent vessel gives way at its entrance into the gland, and that the lymph, still passing upwards, overflows, and enters into the cavities of the cellular membrane, and there coagulating, gives the unequal feel observed in this disease. This is by no means a satisfactory explanation, and we are still ignorant of the nature of the disease. No opportunity appears as yet to have occurred of examining the leg of a patient labouring under the influence of this singular complaint.

The disease has been attributed by Mr. Frye to an obstruction of the lymphatics; but he apprehends the disease to originate in the inflammation of the trunk or trunks of these vessels, which inflammation may be excited by pressure or the

absorption of some acrimonious matter. Dr. Denman entertains sentiments pretty similar to those of Mr. Fryer; for he believes the disease to arise first in the inguinal glands, by the absorption of an irritating principle in the discharge, the consequence of an unhealthy secretion from the uterus. These theories are rejected by Dr. Kule, as being inadequate to explain the various phenomena of the disease; and he offers the following, which he conceives to be more consonant to its real nature. As predisposing and exciting causes to it he enumerates, — first, — the increased irritability and disposition to inflammation which prevail during pregnancy, and in a still higher degree for some time after parturition. 2ndly — the over-distended or relaxed state of the bloodvessels of the inferior part of ~~the inferior part of the trunk~~

the trunk, and of the lower extremities. 3rdly. Contusions; or, violent exertions of the muscles about the pelvis and thigh. 4thly. Plethora, occasioned by a suppression or diminution of the lochia, or of the secretion of milk. 5thly. Food taken too freely; and, 6thly Standing or walking too much or too early. The proximate cause he supposes consists in an inflammatory affection, producing suddenly a considerable effusion of serum and coagulable lymph from the exhalents into the cellular membrane of the limb; and he thinks that there exists a close connection between phlegmasia dolens, puerperal fever, peritonitis, and some other disorders.

Doctor Thomas is of opinion that little or no inflammatory tendency prevails in the system in this complaint. — "The disease, says he, "appears to be of a local nature, And

"~~and~~ confined to the lymphatics of the "the limb — on the side affected". —
"The Doctor thinks, that the slight tem=
=porary derangement which takes place
in the system appears to be induced
wholly by the local affection, pain,
and distention.

Doctr. Denman supposes, from
the nature of the disease, that the
inguinal and neighbouring glands
seem to be the "parts first affected,
and the subsequent swelling of the
limb to be evidently occasioned by
the blocking up of the "passage for
the lymph through those glands. —
"He considers the "pain and extreme
soreness of the limb, which are al=
=ways somewhat abated when the
swelling comes on, to be incidental,
so that the swelling seems to "prove
that those, which were before over dis=
=tended, are relieved, either by the
bursting of some, allowing the effu=
=sion

=tions. According to Burns the disease is not an inflammatory one; but from the dissections of Dr. Davis, I presume Mr. Burns has merely taken a partial view of it.

Our distinguished coun=
=tryman, Doct. Stosack, of New York, considers it as a general inflamma=
=tory affection of the whole ~~limb~~ limb, affecting all its various struc=
=tures. He considers that it is not confined to the lymphatics; nor does he suppose it to be produced by pressure of the child in delivery.

The case to which I adverted in the preceding pages, which was under the care of Doct. McManus, of this city, appeared, in every respect, to be of an inflammatory kind. Although, it was two days after the disease made its appear=
=ance before I saw the patient,

still there was an evident tension in the pulse, with other symptoms strongly indicating the existence of inflammation. It would be well, here, to remark, that the Doctor had previously bled her to the amount of sixteen ounces, and had ordered her bowels to be kept freely opened by neutral salts, still an inflammatory disposition prevailed. After two days more, which was about the fifth after the first symptoms appeared, she was again bled to the amount of about twelve ounces. Her bowels being free in their action, the salts was superseded, at night, by the following receipe:—

Mun: hydr: Nitri. gr. xij
Pulvis Antimonialis ℥j
Pulv. Ipecac: gr. xij
Nitras Potassa ℥j
M. ct. vi —

The Patient commenced with the powders at nine o'clock at night, one of which she took every three hours during the night until the whole were used.

I accompanied the Doctr. next day to see her. Her pulse, which was the day preceding rather tense and nearly 120 in the minute, was now reduced to 90; her tongue appeared moist and not so much furred; her skin perfectly cool and moist, swelling much dimi=nished, and, to every appearance, considerably improved generally. After a few days, say two or three, she ~~of~~ was perfectly destitute of disease, save alone a slight tumefaction of the extremity, which the Doctr. imputed to a debility of the absorbents; and for which he ordered a liniment composed of equal parts of Aqua ammonia,

Spirits of Camphor, ~~and~~ Oleum Olivæ, and Tinct. Opii, together with the internal use of Calomel in small quantities, Squills, Sulphuret of Antimony, and Nitrate of Potash.

For my own part, I cannot offer much respecting its Pathology, as I have not had an opportunity of seeing but the case I have related, from which I would infer it was evidently an inflammatory affection; and, as such, should be treated on the antiphlogistic Plan.

An Inaugural Dissertation

On Cynanche Malligna

Respectfully Submitted to The

Inspection of The

Provost, Faculty & Trustees

Of The

University of Md.

By Samuel Swope

Md. Maryland — 1830

To Dr. Jno. Swope

This Inaugural
Dissertation is respectfully in-
scribed as a Tribute of
Gratitude and Friendship
By
April 5th 1830 S. Swope

"Cynanche Maligna"

The term Cynanche is derived from two Greek words, which import, the strangling or suffocating a dog, so called from dogs being said to be subject to it. It is a genus of disease which Cullen places among the Pyrexiæ & order Phlegmasiæ he says this name is applied to every internal inflammation of the Fauces; but these Inflammations are different, according to the part of the Fauces which may be affected, and according to the nature of the Inflammation. In his Nosology, after giving the character of Cynanche as a genus he has distinguished four different species, the second of which I have taken up viz Cynanche Ma-

-ligna. the Malignant, Putrid, or Ulcerous,
sore throat which is very easily distin-
-guished from the Inflammatory Cynanche,
at least, that which is produced by a greater
degree of Action. As Dr Rush said Mortifi-
-cation was always brought on by Increased
Action, in consequence of which he un-
-sheathed the Lancet, but was generally
unsuccessful, It is produced most fre-
-quently by a peculiar state of the atmos-
-phere, hence it is frequently Epidemic,
seldom Sporadic, & never Contagious, As
some Authors have Endeavoured to
prove, Dr Cullen regards the Eruption
of Scarlet Fever as a Pathognomonic
Symptom of this disease, but I shall
Endeavour to show, that this is Con-
-founding two diseases which are very
Clearly distinct & as a Consequence
require different treatment, Cynanche

Maligna, May and does attack persons of all ages, but more commonly the young, & those of a weak & infirm constitution, the disease is ushered in by a chill succeeded by reaction, with Nausea, sickness, anxiety & vomiting, about the same time, a stiffness is felt in the neck, with Hoarseness of the voice, and uneasiness in the internal fauces. which when viewed appear of a deep red colour, with some turnour but those are seldom considerable, and deglutition is seldom difficult or painful, they soon a number of white or ash coloured spots appear upon the inflamed parts. These spots spread and unite, covering almost the whole fauces with thick sloughs: which falling off discover ulcerations, while these

Symptoms proceed in the fauces, they are generally attended with a Coryza which pours out a thin acid and fluid matter, excoriating the nostrils and lips. there is often especially in Infants, a frequent purging; and a thin acid matter flows from the Anus, Excoriating this and the neighbouring parts. With these symptoms, the Pyrexia proceeds with a small, frequent, & irregular pulse and there occurs a manifest exacer-bation every evening, and some remis-sion in the morning, a great debility appears in the Animal functions; the sensorium is affected with delirium frequently with Coma, On the second day, frequently later, Efflorescences appear upon the Skin, which at some times in small points hardly Eminent

but for the most part in patches of a red colour, spreading and uniting so as to cover the whole of the skin. They spread first about the face and neck, and in the course of some days spread to the lower extremities. The scarlet redness is often considerable on the Hands and Extremities of the fingers, which feel stiff and swelled. The Eruption is irregular as to the time of its appearance and duration. It usually continues four days. and goes off by some desquamation of the cuticle; but neither on its first appearance, nor on its desquamation does it always produce a remission of the fever, or of the other symptoms. "Dr. Cullen also regards the scarlet Eruption as a Pathognomonic symptom of Cynanche Maligna," he says the

the latter is not essential to, or in other words does not always accompany Scarlet fever. And on the other hand, a Scarlet Eruption is not essential to, nor does it always accompany Cynanche, though he contends that it does almost always. but that the diseases are essentially different. Dr. Caldwell says that notwithstanding all Dr. Cullens reasoning, he is strongly inclined to believe that Scarlatina Anginosa & Cynanche Maligna, are but different forms or degrees of the same disease, and that they stand related to each other, precisely in the same ratio, as distinct and confluent Small Pox; But how does Dr Caldwell reconcile the contradiction which he bluntly makes on the next page, where he says in most cases of Scarlatina, Bleeding constitutes

an important remedy, and may be repeated several times with the greatest advantage, yet he calls them both the same, while his treatment acknowledges them different, for while he bleeds and uses the antiphlogistic regimen in one, he uses stimulants & tonics in the other. That they are essentially different we think no physician can for a moment hesitate or doubt, we will now give the diagnostics by which we characterize each, & one from the other. Cynanche Maligna has been called putrid sore throat, on the pages of the Olderk writers, while we do not find a word said about scarlatina. The one is inflammatory the other is not. Cynanche Maligna is described as being a disease, attended by a low

Typhus state of Fever with an affection of the throat, Scarlatina is an Inflammatory disease, with an Eruption on the skin, which differs in Colour, by being like a Burnt Crab shell. There is also an affection of the throat but the Sloughs are White & do not manifest that Malignant appearance of the other, Cynanche affects the debilitated persons, and also those who have had Scarlatina. "Which is not usual for a Contagious disease to affect the same person twice" Therefore we say one is Contagious, the other is not, we will prove that Scarlatina is Contagious, by the well known fact of a person visiting a family in which the disease is prevailing, he returns to his own section of Country, has the

disease, and contaminates all those who may come within the sphere of his contageonized apartment. The eruption and countenance of each are also different. In Scarlatina it is of a scarlet colour sometimes, of a modena red, it is not bricular nor pustular; the face is red and swelled, In Cynanche the face is pale and cadavrous, there is a very great prostration of strength, this never is the case, at least only secondarily in Scarlatina, and results from the proper depleting remidies, not being used in the first stage. This is the principle cause from which danger results. If properly treated in the first stage it never should terminate fatally, while on the other hand, Cynanche Maligna in most of the instances does terminate thus; also there is a

Scarlet fever Entirely free from Any affec-
tion of the throat, Which sometimes pre-
vails As An Epidemic; therefore there Must
be a Scarlet Eruption produced by a Specific
Contagion, without Any determination
to the throat, & thus the Contagion May
be supposed to be More Especially deter-
mined to produce the Eruption only.
Also in the Commencement of this disease
it is Not attended With so Much Anxiety
And Vomiting, Which introduce other
Exanthematic diseases, And More
Certainly Cynanche Maligna, Also
When the Sloughs have formed they
Are of a White Appearance, than in
Cynanche, It is Also attended with
less Coryza than the latter. From these
Considerations though there May appear
to be some Affinity between the two

diseases, it will, and must remain Evident, from what has been said, that the two diseases are specifically different. I shall now give the Treatment but from what has been said in union with the difference of treatment, we will say nothing more of Scarlatina, more than just to observe once more that its mode of Cure principally depends, upon a strict observance of the Antiphlogistic regimen & in the Treatment of Cynanche the debility attending must be kept constantly in view, therefore all Evacuations by bleeding & purging are improper, except in a few very few instances, where the debility is less & the Inflammatory symptoms more considerable, Costiveness also is always to be obviated. The fauces are to be preserved from the Effects of the acrid matter

they are therefore to be frequently washed
with Gargles, While we support the
general Tone & strength of the System
by Tonics And Stimulants. of which
Bark, Wine, Camphor, Musk And
Ammonia that Are principally Used,
When Any Considerable Tumous ari-
ses, Blisters Applied Externally Will
be of service & Are Much prized in the
Estimation of some, Dr Potter however
says the State of debility is so Great
that if We Are Not very Careful the
part Will become Gangrenous And
form An Obstinate Ulcer, some Alby
have Used Emetics, or Nauseating Rem-
idies these Can Always be dispensed
With

Finis

An Inaugural Dissertation On Uterine Hemorrhage

for the Degree of Doctor of Medicine

Submitted to the examination of the Provost Trustees and Medical Professors of the University of Maryland

On the ~~fourth~~ fifth day of April 1830

by

Ebenezer N. Allen of Maryland

To G. C. M. Roberts M. D.

Dear Sir

The great veneration in which I hold your talents and your private worth, would have been sufficient inducements for this dedication, but but the polite and friendly attention which you have invariably shown me doubly demands my highest compliment. With the warmest wish for a permanent restoration of your health, and the reiterated success of your scientific labours, I am with esteem,

E. N. Allen

Introduction to observations on Uterine Hamorrhage

A young man when about to commence his medical career has an arduous task before him and aught to be very circumspect as to the path he intends to pursue. The eyes of the world are upon him and when he makes his appearance in the character of a man of science he cannot be too cautious. If any thing should drop from my pen that is not congenial with the feelings of my able preceptors they will excuse the error and impute it to inexperience.

When we cast our eyes around us and

see with pain the many and awful diseases with which men are affected and see the doleful crowds which face our streets affected by some malady within the reach of medicine. And those persons are from some cause neglected and left to the ravages of disease and death it excites in the mind of the benevolent and humane man feelings of sympathy and sorrow and he is ready to exclame was it in my power I would relieve the sufferings on my fellow being and snatch him from the influence of disease and from the jaws of death. I hope I may be excused when I say that I believe the greatest number

of these diseases are brought on us by our own imprudence. I believe that is now the received opinion that the habits of mankind give rise to at least one half of the disease with which our world is afflicted. Then it becomes the duty of every medical man as well as of the good part of the community to use their exertions to correct and improve the habits of our fellow beings

To alleviate misery and enable man to enjoy and extensive portion of health and happiness has been the first and most anxious wish that has moved the bosom of the humane

In making choice of a subject for this dissertation many obstacles have been presented the innumerable variety of diseases which are interesting to the medical man have already called forth the talents of the most able men of the world and they have exausted there ingenuity in laying down rules by which we are to be governed.

Others who have been candidates for medical degrees have tasged there ingenuity to make discoveries in the science; whose treatises I cannot hope to improve. I shall therefore content myself with making a few general remarks on Uterine Hemorrhage.

Uterine Hæmorrhage may be considered a preternatural discharge of blood from the Uterus from a special or partial seperation of the placenta which in general may be tookon as its immediate cause

But the remote causes are various and indeed when we think of the many dangers to which the pregnent female is exposed we are only astonished that they are not more frequent Some persons every time they ~~are~~ become pregnent are threatened with immediate death. whilst others can go through the most arduous and toilsom duties with out the least inconvenience. We ~~are~~ at a loss to account ~~ascert~~

for these things except on the grounds of the habits of the two classes one from childhood to undergo fatigue and toil whilst the other is raised in the most delicate manner. And when they become pregnant the system has not sufficient energy to bear the changes which have taken place.

The various opinions with respect to the attachment of the placenta to the uterus are so fully before the before the world that it is unnecessary for me to make any observations on the subject and shall speak of the causes and treatment alone

Uterine Hæmorrhage is more less dangerous according to the length of time the female has been pregnent for the following reasons.

In early pregnancy the womb is not much distended and the quantity of blood necessary for the support of the embryo being very small and the vessels which attach the placenta to the Uterus inconsiderable in size if a hamorrhage come on it is consequently discharged in so small gradual and insensible quantities that the system has time to replace the loss and by that means the embryo is preserved and we are by a judicious treatment enabled to save both mother & child.

But when the female is very far advanced the vessels have become important and are carrying large quantities of blood. If at this time from some cause the connection of the placenta are broken up the hamorrhage

is profuse and the patient may sudenly fall a victim to it. In such cases there is not a sufficiency of blood to keep the heart in motion and the patient soon faints and from that will seldom if ever recover. These cases require the most prompt & energetic exertions on the part of the practitioner such as the immediate rupturing of the membranes and and letting off the water. In order to bring on labour as soon as posible introducing the hand taken hold of and bringing down the feet of the child at the same time using astringent injections and cold applications. Hemorrhage from bruises or falls may be considered the most dangerous for they are of such a charactor that they not only produce the most alarming Discharge but

also other serious effects as inflamations &c. In the last stages of pregnancy they are not constant but will cease for a time and then come on with redoubled violence and unless aid be had immediately they may in a few minutes prove fatal.

In those cases the Hemorrhage may be either secret or visible. In the the secret we have some trouble to discover the source of the mischief and before we are a ware syncope may be induced but when we find the patient complaining of great weakness and there is an enlargement of the abdomen a pale sallow countenance with a weak tremulous pulse and the symptoms of a proachin syncope we may suspect an

invisible hemorrhage and we are to proceed accordingly. There have been various methods of treatment in such cases, but I shall content myself with detailing those I think the best.

When the Hemorrhage is in the last month of pregnancy, I think the most judicious plan would be to bring on labour as heretofore pointed out such as delivering by the feet; using injections and cold applications. If the patient is plethoric use the lancet, if she is in a state of debility use a nutricious diet with some astringents given internally.

Hemorrhage may be produced by the placenta being ~~placed~~ attached in part or whole to the Os tinea, and in this case we call it a hemorrhage from recupity. When this is the case, the patient may pass through her first months of gestation without much

inconvenience; but when the Uterus by the growth of the foetus becomes distended and the cervix thus lost in a considerable degree, there must be hemorrhage; for then the connexions of the placenta in part or in whole are interfered with. It is thought by some there that is as much hemorrhage danger from the edge of the placenta being attached to the os tincae as if it was directly over it, to this opinion I cannot subscribe; for it appears to me that when the placenta is merely attached by its edge that there will not be so great a number of vessels lacerated and consequently there cannot be so great a hemorrhage.

There is some dispute as to the method to be pursued, but I am of the opinion that when the hemorrhage is considerable

we ought to introduce the hand by the side or through the placenta and rupture the membranes and permit the water to pass off; taking hold of the feet and bringing them down.

But if when we have ~~taken hold~~ brought the feet, the womb does not contract on the child, we should ~~we should~~ wait, as there is but little dange from hemorrhage at this period, on account of the prepune of the child on the broken vessels. On the contrary, if we were to bring the child away and the womb did not contract we might have a greater degree of hemorrhage than before and lose our Patient in the end. Should hemorrhage come on and continue after birth we should act as in other cases;

that is we should use all the means to excite the womb to contract, viz by gently rubbing and pressing on the abdomen, or by irritating the uterus, or by giving som astringent, or stimulating injections; as alum, lead Zinc, Quercus robur, or kino; at the same time employing cold applications.

Hemorrhage may proceed after delivery, from a want of power in the womb to contract, on account of debility in the general system, which may be produced in various ways, either from disease during the period of Gestation, or from tedious labour or from the patient having lain too much on one side, and the powers of the mother may have thus become

so enfeebled that the blood is poured out, (and if not soon relieved may terminate in death.!) In case of this kind I think the most judicious plan to be pursued is, to excite the uterus by introducing the hand and moving it in different directions in utero by giving some cordial, and nutricious diet, at the same time using astringent injections, as Jice, alum &c. and cold applications as ice water, lead water, vinegar & water; also enjoining perfect rest. With these remarks I shall conclude by submitting this with respect to the Faculty &c

Ebenezer N. Allen

A Dissertation
on the
Pathology
of
Inflammation.

Felix qui potuit rerum cognoscere causas.

Submitted to the
Professors of the
University of Maryland.
by

Thomas Smyth Wilson

A. D. 1830.

With feelings of deep interest, we avail ourselves of the present opportunity, to pay a debt of gratitude, by dedicating this our first essay on a medical subject to a Kind and affectionate Parent —
Under his guidence, we have not only been from our earliest infancy; but under his immediate direction, commenced and prosecuted the study of Medicine
To him we are indebted for much practical information, and for the many difficulties he has enabled us to surmount —

Of the Pathology of Inflammation

— Causa latet vis est notissima. —

Reflecting on the various subjects of medical science suitable to our present purpose none has occurred more fit than an enquiry into the Pathology of Inflammation.

It is not our intention to set forth any new principles on the subject now before us; but shall contentourselves with making use of such facts as have been presented to us by others, and those arguments which appear to be best calculated to support the the opinion we have been induced to adopt—

Should we be found in the course of this essay to differ from any of the Professors now holding a chair in the University of Maryland, let it be recollected that we advocate the doctrine hitherto taught in that school with so much eloquence and learning by the late lamented Professor Davidge.

As a Physician and a Professor he stood preeminent; all acknowledged and respected his talents; and no one heard him but to admire his depth of research and learning.

Were we to adopt implicitly the precepts of others, and not as becomes every philosophick and enquiring mind, endeavour to sift out for ourselves and arrive at the truth or fallacy of the various opinions that daily present

themselves, either personally, or through the writings of great men, we should be even lost in the Dædalian labyrinths of error. Perplexed and confused we should search in vain for the clue; and instead of collecting practical and useful knowledge from our studies, and advancing towards the Zenith of Medical attainment, we should be considered as one of those, whom the Mantuan Poet calls — Semper discentes nunquam ad scientiam pervenientes.

Let us not stop to consider the opinions handed down to us by Galen, Hoffman, Etmuller, Stahl, Boerhaave and others amongst the antient writers, but pass on to those prevailing in the schools of the present day — But let us first premise, that there are two powers in the animal system tending to preserve life. The one the Power of Conservation, which presides over the vital functions of assimilation, circulation, and respiration. The other, the Power of Restoration, by which local injuries are repaired, and the effects of disease obviated — such as the union of a fractured bone, granulation, cicatrization, and the healing of an incised wound: by what has been termed in surgery union by the first intention. We cannot agree with Mr. Hunter, that this union by the first intention, is either a diseased action, or (as he has been pleased to term it) a healthy inflammation. This operation of nature (for thus it must be considered) will generally take place, when the surfaces of a recently incised wound are neatly applied and kept in con-

tact a sufficient length of time, to allow the adhesive matter to be poured out and the new vessels to shoot into it. But we constantly find that when the powers of life naturally resident in the parts affected have been seriously impaired, where there is foreign matter present, or where the temperature has not been properly regulated, that union by the first intention is never accomplished, but a morbid process inflammation itself will arise —

In his sixth division of his second chapter on inflammation, we find Mr Hunter speaking in the following manner —

"I have given the most simple idea I can form of an injury done to a part, with the natural, immediate, and consequent means of restoration — I have also treated of cases where they become a little more complicated, requiring the aid of art as a substitute for the simplicity of the first. The action of the parts is not necessary in either of these, except that of the blood forming its own vessels and other solid parts, and becoming of the nature of the parts in which it is extravasated — But I took notice that the violence done was often so great, or that restoration did not take place so readily, as in such cases to exclude irritation; we have therefore an action in such cases taking place in the parts, called inflammation. That this action assists in the restoration by producing an extravasation of the coagulating lymph, which becomes the second bond of union — I have also stated what may be

called the natural tendency to inflammation, to serve as a kind of leading principle — We shall find that inflammation may arise from very different causes, and often without any apparent cause, and that its operations are far more extensive than simply the act of producing union in parts divided by violence; for it more commonly produces union in whole parts or in natural separations, such as the common cellular membrane, large circumscribed cavities, joints &c. because such surfaces are not naturally disposed to unite, but only in consequence of some uncommon action being produced; — And although these adhesions are unnatural, yet that tendency of the parts to admit of this union becomes a species of cure — It is in consequence of the parts taking on, in some degree, the same mode of action which divided parts do, when brought in contact, that in such cases suppuration is precluded. As inflammation often arises from disease, its salutary purposes are in many instances not so evident, although they may finally take effect; as it likewise takes place in disease, or becomes the ultimate in disease, where it did not begin in it, as in the scrofula, cancer, &c. and some indolent humors on these accounts, too, its salutary purposes are sometimes not so obvious — However, upon the whole, as inflammation is an action produced for the restoration of the most simple injury in sound parts, which goes beyond the power of union by the first intention, we must look upon it in such

instances, as one of the most simple operations in nature, whatever it may be when arising from disease or in diseased parts. Inflammation is to be considered only as a disturbed state of parts, which requires a new but salutary mode of action to restore them to that state wherein a natural mode of action alone is necessary; from such a view of the subject, therefore, inflammation in itself is not to be considered as a disease, but as a salutary operation, consequent to some violence or some disease" — so far for Mr Hunter. If there is any one who will say that he can clearly comprehend the above quoted paragraph, and reconcile its contradictions we must freely acknowledge that his understanding is far more acute than our own. We do not pretend to any high order of intellect; but we certainly do pretend to some share of common sense — That inflammation which "more commonly produces union in whole parts or in natural separations" should still be considered as "but a salutary mode of action" appears to us a strange perversion of the doctrines of healthy action — But the reason alledged is still more strange — "Because such surfaces are not naturally disposed to unite, but only in consequence of some uncommon action being produced" — Fever may be considered a healthy operation, with as much reason as inflammation is to be considered — And yet will any one say that because fever does not always terminate in death, it is not a disease —!

+ We allude more particularly to the adhesions
Peritoneum of the Pleura and to Anchylosis are
quences of disease

Of the numerous deaths which fill up the bills of mortality, how many are there, in which inflammation is not concerned? We are inclined to the opinion, that all fevers are more or less connected with inflammation — In the same page he says, "that inflammation in itself is not to be considered as a disease" and adds, a little farther on, that "fever in all cases or of all kinds, is a disturbed action, like inflammation itself". Now what are we to understand by all this? Does Mr Hunter mean to convey the idea that fever and inflammation are agencies tending to living organization? Can we so far forget the dictates of reason, of prudence and of common sense, as to believe for a moment, that those "unnatural adhesions" which we so constantly witness in the dissecting rooms, "are salutary operations"? If inflammation is but a "salutary operation", why do we interfere to arrest its progress? Should we not rather cooperate with it, for those principles) and thus accomplish the end we have constantly in view viz the health of the Patient!

Therefore we conclude, that inflammation in all its shades, and forms, from the deepest "scarlet" to the slightest "blush", can be reasonably considered as nothing short of disease, —

We shall speak presently of that part of the paragraph which treats of the "blood forming its vessels" —

Inflammation is characterized by increased redness, heat, tumefaction and a throbbing sensation in the parts falling into disease.

In his chapter on the action of vessels in inflammation Mr Hunter has the following remarks – "The act of inflammation would appear to be an increased action of the vessels, but whatever action it is, it takes place most probably, in the smaller vessels, for it may be confined almost to a point where nothing but the smallest vessels exist – The larger vessels may be considered as only the conveyers of the materials for the smaller to act upon and dispose of according to the different intentions; however, inflammation in a part, is not only an action of the smaller vessels in the part itself, but in the larger vessels leading to it" – Here Mr Hunter involves himself in a direct contradiction – But let us see – how far his positions are warranted – This increased action of the vessels, must be either an increased frequency or force of contraction –

Admitting for the sake of argument that one part of the arterial system is capable of more frequent contraction than another; What will be the consequence! Why it appears sufficiently obvious that as the action takes place in the "smaller vessels" only, of the part inflamed, and the "larger vessels leading to it are merely conveyers, that the very cause of the phenomena of inflammation, would exist –

For as the small vessels would by their greater frequency of action, empty themselves faster than they could be supplied with blood by the larger and more passive conveyers, instead of redness, swelling &c. we should find the part pale and shrunken — But let us go farther and admit that the larger vessels also have a greater frequency of action — Will this account for the phenomena? Do we not find the action of the vessels more frequent after violent exercise, during the first stage of a fit of intoxication, or at a moment of great mental excitement? And is this inflammation?

No one it is presumed, who pretends to the least knowledge of the character of inflammation, will be found to risk his reputation as a physician so far as to assert that they are essentially the same — Yet we may have inflammation supervening upon either of the above mentioned causes; for instance: When the parts have suffered such a degree of stimulation, as to bring about indirect debility, they will be no longer able to endure, in that state of debility their accustomed stimuli, and inflammation must be the consequence. Thus we find that we are left completely in the vocative by increased frequency, let us now see how far increased force of contraction will be as out — If the arteries contract with more vigour than usual, their diameters must certainly be lessened, and consequently less blood would be capable of

passing through them than when in their ordinary state. Neither can we refer the increased pulsation, to a more vigorous contraction. For the pulsation felt, is nothing more than the dilatation of the arteries, which is always greater or less according to its capacity to resist the impelling force of the heart; as we shall presently endeavour to demonstrate.
That inflammation may arise from friction or the application of stimulating substances to a part, we can readily admit, but cannot agree with Mr Hunter that it is in consequence of "an exertion of the action of the vessels." Irritation of whatever kind, will produce a reduction of the powers of life in the part, and a consequent debility and weakening of the coats of the arteries, thus rendering them incapable of sustaining the impelling force of the circulation.
Boyer in his work on Surgery advocates the equivocal doctrine, that irritation draws the blood "the blood from all points of the circumference to the centre of the irritated part." What are we to understand by this? Laying aside the absurdity of the remark, that the blood gets to this centre "by retrograding in certain vessels, until it reaches the centre of inflammation" by what power does "irritation draw the blood from all points of the circumference"? Great men appear to be privileged to say what they please. But it should be always borne in mind, that nulla valant, sed pta autem manent.

Blood gets into ~~the system~~ by of a divided vessel the
the medium of inosculation and it is through
medium that the heart also acts on it —

It has been pretty generally acknowledged we believe, that the collumn of blood is continuous from the valves of the heart to the remotest point of the system. Then by what means does this increased quantity of blood arrive at the initated part? It must either get there by the enlargement of the old, or the addition of new vessels. And will any one dare affect that the mere irritation of an extremity would enlarge the great arteries, or give rise to the formation of new tubes?

Can anther finding himself involved in a dilemma, must need set his ingenuity to work in order to extricate himself, and after a mighty effort, nascitur ridiculus mus. He tells very gravely that "the blood gets there, even contrary to its ordinal course by retrograding in certain vessels." Since it has been admitted that the blood is continuous throughout the arterial system, and that this collumn is propelled by the powers of the heart and arteries, can it be supposed for a moment that the minute capillary vessels are capable of driving back this collumn in a retrograde direction, contrary to the impelling powers of the heart and larger arteries?

The vessels of a part may be weakened and dilated. The blood may accumulate and move more slowly according as the vital powers of the vessels are reduced: but there assuredly can be no retrograde action. The retrograde action that takes place in divided vessels is under the influence of the heart. +

Does "irritation draw the blood" then, by the action of the smaller vessels, pumping it up as it were! He expressly states that "this afflux of blood produces the dilatation and augmentation of the action of the arteries." Shortly after, we find him resorting to the ancient remedium in ancipiti morbo— He says in act, the heat, the redness, the inflammatory tension, and hence an augmentation of the vital powers, and the organic action of the capillaries— We flatter ourselves that it has been shown, that inflammation does not consist, in either an increased force or frequency of action in the capillaries— And it appears to us strange and inconsistent, to talk of "an augmentation of the vital powers".

The perfection of the vital Power depends upon the regular and easy performance of all the functions subservient to the animal economy. There exists between all parts intimate relations, corresponding with each other, and carrying on a reciprocal intercourse of action. The beautiful harmony "says Sir Astley Cooper" produced by the concurrence of all the actions called Health". In proportion as this harmony is disarranged or interrupted so will the functions of the parts be disturbed: By whatsoever means the functions are derranged, the vital powers must be first acted on and impaired. For so long as the vital powers, are capable of sustaining any degree of violence unimpaired, so long will the animal economy remain unimpaired and in health

We can account for some of the phenomena of inflammation, without admitting a diminution of the vital powers, and consequent debility and disease. When we reflect that the fullness of vital power is health; how are we to believe that there can be "an augmentation of the vital powers"! If Boyer be correct, inflammation must be only considered as a higher gradation of Health. But why argue a point that is self evident, and needs no demonstration! Terence would tell us, that this is facere ruta manu—

Let us now take up the diagnostic signs of inflammation — And first of redness — Authors agree that the red colour of the inflamed part, is ascribable to the quantity of blood it may contain and differ only in accounting for the means by which this accumulation may be effected — "This increase of red" "say Mr Hunter" "appears to arise from two causes; the first is a dilatation of the vessels, whereby a greater quantity of blood is allowed to pass into those vessels which only admitted serum or lymph before" Before there can be a greater quantity of blood in a part than under ordinary circumstances, there must be an increase in the capacities of the vessels. For unless their diameters are increased, (being always full in a state of health) they never can contain an increased quantity of blood.

Inflammation therefore, is in proportion to the capacities of the vessels to contain an increased quantity of blood. If inflammation be an increase in the capacities of the vessels; by what means are they enlarged? There are but two ways in which a vessel can be enlarged: the one a healthy and natural action; the other a diseased and morbid process. In inflammation the vital powers are suspended; in the ratio of its degree. The enlargement of the vessels, cannot therefore be attributed to any operation of nature. Much time is also required for an increase by a natural process. In treating of this part of the subject, Dr. Hunter writes with a decade unintelligibleness and is found wandering in all the mazes of obscurity. Speaking of the dilatation of the arteries, he says— "When we consider the whole of this as a necessary operation of nature, we must suppose it something more than simply a common relaxation; we must suppose it an action in the parts to produce an increase of size to answer particular purposes; and this I shall call the action of dilatation, as we see the arteries increase in size in the time of the uterine gestation, as well as the testicle in the time of labour". We imagine no one would say that this is nothing "more than simply a common relaxation!" We must again object to the assertion that 'tis a "necessary operation of nature"—

What idea does Mr Hunter intend to convey to our minds, by what he calls "the action of dilatation"? The idea we entertain of dilatation, is, the capacity for being enlarged when impelled upon by some active agent. That an elastic tube could dilate itself, without being acted upon, is a thing impossible. The muscular coats can have no agency in this "action of dilatation", for they would tend to diminish rather than increase the size of the vessels - this Mr Hunter appears to have been aware of, when he tells us, "that instead of an increased contraction there was rather what would appear an increased relaxation of their muscular powers being left to their elasticity entirely." and again, "the power of muscular contraction would seem to give way in inflammation, for they certainly dilate more in inflammation, than the extent of the elastic power would allow;" - How this "increased relaxation" can be reconciled with his previous position of "increased action" we leave for others to determine.
An action in a part "to answer particular purposes" must be under the direction of the animal economy, and consequently, a healthy action. 'Tis absurd to say, that nature has provided an action for other purposes than those necessary for the preservation of health and integrity.
The increase of the arteries of the uterus and of the uterus itself, during the period of gestation,

is an operation of nature carried on for wise and natural purposes. Were this operation dispended, animated nature must cease to exist — Who can there be one found bold enough to assert that inflammation is necessary to existence! How then can Mr Hunter give them to us as parallel cases? The evolution of the "os tinca in the time of labour," is also a natural process carried on under the direction of the laws governing the parts. Mr S. Cooper in his work on surgery, says, "There must be something besides merely an increased action of the vessels; there must be something besides an enlargement of their diameter, to constitute inflammation. Both of these changes happen to the external carotids in the growth of the stag's horns; to the spermatic arteries of animals, which copulate only at certain seasons of the year; and to the arteries of the uterus in the time of pregnancy. Still in the instances now mentioned, there is no pain, no inflammation, no symptomatic fever." After thus showing that these natural processes differ essentially from inflammation, we find him saying in the very next page, "Such an augmented flow of blood to a limited point of the animal machine, cannot be produced by the action of the heart, but must arise independently of it from a power possessed by the vessels themselves; the same kind of power, which occasions an increased determination of blood to the cheeks when a person blushes, and

which injects the corpora cavernosa under sensual excitement"! Resting our objection on Mr Cooper's own acknowledgement, we deny that the vessels in inflammation become turgid and enlarged by the same kind of power which occasions an increased determination of blood to the cheeks when a person blushes; and which injects the corpora cavernosa under sensual excitement." For these are healthy actions, performed by natural laws, and inflammation, as we have stated above, can never take place so long as the vital actions of the parts remain in their prime. And "Still there is no inflammation, no pain, no symptomatic fever." To what then are we to ascribe this "augmented flow"? he say it "cannot be produced by the action of the heart" and that "there must be something besides an increased action of the vessels." We have heard a great deal lately of the capillary vessels acting as suction pumps, and drawing the blood towards the irritated part — In reply to this, we will simply ask — if any one has ever seen these little Hydraulick machines, performing their laborious task? And by what invisible hand they were worked?

He must have good eyes I ween,
Who sees what is not to be seen —

We imagine that the animal economy is in no case entirely subject to the mechanical laws, that govern inert matter: but is under the immediate control of its own peculiar vital principal —

Now since we cannot ascribe this increased capacity of the inflamed vessels to "an action in the part to answer particular purposes." May we not consider it, a weakened state of the vessels, produced by some foreign agency so acting on the part as to reduce its vital energy. So soon as the vital actions of a part are impaired by an unfriendly cause, the tone of the arterial tube is lowered, and rendered less capable of resisting the influence of the heart. Consequently the diameter of the vessels will be increased; and their recovery upon themselves (to use a French expression) will be less complete, and thus there will be a greater accumulation of blood in the part. It cannot be doubted, that the vessels are enlarged in their capacities; and that this increase be marked is also necessary; otherwise, inflammation is not disease, but Health. Inflammation must always originate in the colourless arteries, and before these can be injected with red blood the tone of their coats must be impaired. We have in addition to Mr Hunter, the testimony of many respectable writers, that the vessels are enlarged in inflammation. Doctor Fowler says, "Arterias inflammatas, quam in statu sano debiliores esse". He also admits it to be probable, that the redness is owing in a great degree to the colourless arteries being distended with red blood. "Valde porro probabile videtur, magna saltem ex parte, debere vasis hypertrophicis sanguine jam tumidis." Here now we find this latenter

and learned advocates for the doctrine of increased action, compelled to admit that the redness is owing in a great degree to the distention of the colourless vessels: and himself, explaining in what manner they are made capable of receiving this fluid, so different in its consistence from what they are accustomed to convey — "Sebilibres esse". The simple admission that the vessels are weakened in inflammation for the accumulation of red blood and the consequent phenomenon of redness — Our conclusion is also warranted, from the effects of an operation. The small vessels of a part, shortly after having suffered from the vibration of the knife in an operation are so much enlarged in their diameters, as to admit a free current of arterial blood to flow, with its characteristic jet; frequently compelling the inpromptent surgeon to embrue the wound, and search for the cause of this teasing, and dangerous hemorrhage. In this case we conceive the knife acting as a foreign agent, to lower the tone of the arterial system, and by thus lessening its capacity to resist an impelling force, the small vessels are compelled to receive a greater quantity of blood than usual — The fact of the exhalents forming out into the surrounding tissue, a greater quantity and a fluid of a gorgeous nature, than when in a state of healthy action, might also be urged as a proof of the weakness of the vessels —

"The second cause of redness (according to Mr Hunter) is owing probably to new vessels being set up in the extravasated coagulating lymph".

No inflammations have this characteristic redness more more distinctly marked than the "true erysipelatous"; or than in that arising from a bulla. And will Mr Hunter tell us, that in these cases, new vessels set themselves up, in the space of a few hours, carry on a circulation for themselves, and after a short time, by what intuitive power he has left us to guess, uniting themselves, to the old vessels and thus becoming incorporated with the general circulating system? Neither has he been kind enough to tell us, how this blood came to be manufactured out of the circulating mass. It could not have been formed by the vessels, for he has told us, that the blood forms the vessels. We are aware that there has been an attempt to illustrate this assertion by adducing as an example, the formation of blood in the egg, during the process of incubation.

This we must ~~unhesitatingly~~ deny to have the least bearing on the point in question — the one being under those natural laws of which we have already spoken so often: the other (even admitting it to exist) being a consequence of disease — But it is the conclusion of its own absurdity — To conceive it possible, that any thing could form itself in ~~[illegible]~~ beyond the loftiest branches of our powers of imagination —

Doctor Bostoc has proved, that what Wm Hunter calles coagulating lymph, is nothing more than the fibrin of the blood: and we learn from Sir Astley Cooper how this fibrin becomes organized by the elongation of the vasa vasorum.

The turnefaction of the inflamed part may be attributed to two causes. The enlargement of the vessels and the effusion of blood. Tis always greatest at the centre of the inflammation, and becomes gradually less and less as it is farther removed from that point. If the vessels are enlarged in their volumes and contain a greater quantity of blood than under ordinary circumstances, it is evident, that this increased size will occupy a much greater space, and therefore the swelling is referrible in a great measure to this vascular augmentation. Again, as the vessels containing red blood are weakened and enlarged, so must also the mouths of the exhalents be dilated; permitting a greater quantity and a more gross fluid to escape. But if the swelling were attributable entirely to effusion, we should not expect to find the phenomenon of redness. For the integrity of the vessels must always be destroyed before there can ever be an effusion of red blood.

The term inflammation takes its origin from the Latin word inflammo, which proves that the idea of heat has been always connected with it.
Although Mr Hunters experiments tend to prove that there is not an increase of temperature yet from the assertion of Fordyce and others we may venture to conclude that there is an elevation of several degrees in external parts. And we shall endeavour to account for it in the following manner. When speaking of increased temperature, we always have reference to something else; — and thus we say that a part is hotter when inflamed, than the surrounding parts, or than when in a state of health. The degree of heat is always in proportion to the blood contained. And as the secretions are stopped by the diseased actions, and insensible transpiration and evaporation, is no longer carried on to take off the super abundant heat, that which would be otherwise latent, is now made sensible.
There is a principal in the animal economy, enabling it to accommodate itself to the surrounding temperature, not by chemical laws, for these would give the animal but a slender tenure of life, and leave it the sport of every vicissitude in the surrounding medium. It is by taking into view this principal, — acting under the special direction of vitality, that we are capable of accounting for the preservation of life, when the animal is exposed to a very high, or very low temperature. —

Without stopping to discuss Mr Hunter's opinion of spasm being the cause of pain in inflammation, we pass on to what we consider a more simple and intelligible explanation. It is now well known that whatever debilitates, increases the excitability, and sensibility, provided, the debilitating influence is not carried beyond a certain degree. and we have already shown, that the vital energy of the part is reduced, and consequently the sensitive capacities of the nerves are increased. Add to this the dilatement of the bloodvessels, the effusion, and consequent tuberfaction, and we can readily conceive, how these morbidly sensitive nerves, put upon the stretch by the swelling become the source of such acute pain in inflammation —

We now come to account for the last characteristic of inflammation; increased pulsation. Having already assumed that the susceptibility to impression is increased in proportion as the tone is lessened, there is no difficulty in admitting that the impelling force would make an impression on the patient above what is natural. But how comes it to pass, that this increased pulsation is really perceptable to the touch of others? It appears to us, to be easily explained, by admitting that the tone of the arterial tissue is lowered, and thus rendered less capable of resistance.

Dilatation in an elastic tube must always take place in proportion as the ratio of the resistence is to the propelling power. And unless this law the blood vessels must come; for 'tis not by any muscular power of their own that they can be dilated; but are dilated by their simple elasticity acted upon by the heart. Now suppose, the heart to have a propelling energy by say 50 degrees, and the blood vessel to resist, with a power equal 30: the resistence being equal throughout, the pulsation would be also equal. But if by some noxious influence, the capacity for resistence, in any vessel, or part of a vessel, be reduced 5. 10 or 15 degrees, would not the dilating force, impinging upon the hand, applied to this weakened part, be greater, in proportion to the number of degrees the tone of the vessel had been reduced below the general standard? Certainly it would; and it appears to us that increased pulsation can be accounted for satisfactorily, in no other way, than by supposing the vessels of a part to be weakened, and thus enabling the heart to make a stronger impression, on the finger when applied. That this sense of throbbing may be attributed, in some measure, to the difficulty the blood meets with, in passing through the contracted vessels we do not doubt. Callisen, and others, believe it owing entirely to the ~~difficulty~~ effort made to overcome the obstruction.

He says "arteriæ minores pulsione sanguinis impetu calidiores dilatatæ, atque elongatæ, in ductus sanguiferos flecti, et sanguinem fermentem ad se promovere videntur, non in ipsa parte affecta solum, sed in vasis circumjectis quoque; et inde pulsatio in parte inflammata" —

We cannot admit this as the sole, or even the primary cause of increased pulsation, yet we think it may be reasonably considered as a secondary cause —

We have now passed over all the phenomena of inflammation — and it will be seen that we ~~are~~ advocate the doctrine, of the diminished action of the inflamed vessels in all its bearings —

Let us next try how far we are justified in our opinion, by applying the principles to the general mode of treating inflammation —

In the treatment of inflammation, the principal object we have in view, is to bring about resolution — This is effected most easily, by reducing the powers of circulation — By blood-letting — low diet, cathartics, and by promoting the secretions — In this manner we accommodate the momentum of the circulation, to the weakened state of the vessels —

We make use also of local bleeding, which removes the congestion and enables the vessels to recover their healthy capacities; and the application of cold, which removes the stimulus of heat, lessens the nervous excitability, and diminishes the diameter of the vessels by its well known power of constriction. The effect produced by the application of spirits of wine, in Mr Son Philips experiment, can be accounted for in this way, without resorting to the doctrine of increased action, and rapidity of motion in the blood. Dr Thompson after a number of experiments, is compelled to admit, that there is sometimes a retarded circulation. By these means we arrest further effusion and the remaining time factor may be removed by the use of such means as produce absorption, such as gentle friction alone, or with the ~~ch~~ camphorated liniment, or unguentum Hydrargyri, Electricity, or pressure effected by means of a roller or the adhesive plaster. Should our efforts to bring about resolution prove abortive our next object will be to promote suppuration. this we accomplish, by the application of heat and moisture, which tends to break up the walls of the vessels in a circumscribed inflammation, and a relaxation of their mouths, and a consequent effusion of their contents, if it be an inflammation arising in consequence of a ~~solution~~ of continuity —

this prepares for the healthy processes of granulation and subsequent cicatrization —

We have now arrived at the conclusion of our subject, and if we have been so fortunate as to have ascertained our positions we shall have accomplished our utmost expectations — If we have failed, interdum magnus dormitat — Homerus — We are not alone — We have trodden in the path pointed out to us by a Thirkland, a Baca an Allen, a Lubbe and a Milton Philip amongst the Europeans and amongst our own countrymen the learned Davidge, and though last not least, the talented Wright —

"Who shall decide when Doctors disagree"!

Finally we must beg leave to return our most sincere thanks to all those, who have in any way contributed to the promotion of our Medical studies either by advice or instruction, and with feelings of gratitude assume them in the words of Virgil

Ante leves ergo pascentur in aethere cervi;
Et pleta destituent nudos in littore pisces;
Ante pererratis amborum finibus exul
Aut Ararim Parthus bibet, aut Germania Tigrim
Quam nostro illorum labatur pectore amor —

An Inaugural Dissertation

on

Tetanus

Submitted to the examination of the Professors, Provost and Trustees of the University of Maryland for the Degree of Doctor of Medicine

by William F. R. Brooke

of Baltimore

March 11th 1830

To Nathaniel Potter M.D.

Professor of the theory and Practice of Physic in the University of Maryland.

This Treatise is respectfully dedicated as a Testimonial of the exalted estimation in which he is held by his former pupil

The Author.

Remarks on Tetanus.

The Disease of which I am about to give a description, is one which in former times excited terror in every Medical Practitioner, who had the misfortune to witness a case of it. I mean Tetanus a genus of Disease in the class, Neurosis, and, in the order Spasmi, of Doct Cullen, characterized by a spasmodic rigidity of almost the whole body. The varieties of this disease generally described by authors are as follows. Viz: Opisthotonos in which the body is violently drawn backwards. Emprosthotonos in which the body is drawn forwards. Pleurosthotonos where the body is drawn to either side, and lastly Trismus or locked jaw. These distinctions I conceive to be of scarcely any utility as all those different stages arise from the same causes and the modes of treatment precisely similar to each other. — — —

Causes

Tetanic complaints may arise from a variety of causes viz: Punctures. Lacerations. Amputations, Fractures of the limbs, Gunshot wounds. Those Punctures particulary, that, are made by nails splinters, or any rough instruments. The injury done to the feet by frost, Cutting the umbilical cord in new-born infants, Sudden application of cold to the body after it has been exposed to an intense heat, particularly sleeping out on the grass in the summer season, and suffering the morning or evening dews to fall upon you. Tetanus (it has been said) arises sometimes from poisonous vegetable taken into the stomach such as, Conium Maculatum, Atropa Belladonna Stramonium, &c. This disease is said to occur most frequently in warm weather, but this is by no means a general rule for cases occur here sometimes in the winter this disease affects all ages, sexes, Temperaments and Complexions, but, the Nervous and Irritable most frequently fall victims to it.

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It is asserted by some authors that Negroes are more subject to this disease than the whites, the former it is true are more frequently affected, in consequence of their being more liable to nails-splinters &c as they generally go barefoot.

Symptoms

This disease sometimes comes on suddenly to a violent degree, but generally it increases gradatim until it arrives at its maximum. It commences with a sensation of stiffness about the back of the ~~tongue~~ neck, which increasing renders at length the motion of head difficult and painful, accompanying this or succeeding it there is an uneasiness felt at the root of the tongue, which augmenting, causes deglutition to be performed with difficulty, and this function will be entirely stopped if the disease be not properly combatted. When the rigidity of the neck has arrived at its ne plus ultra, a vident pain is felt at the Scrobiculus Cordis, and shooting from thence into the back, when this pain arises, the muscles of the back of the neck (in articular) are greatly affected with spasm so as to pull the head

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backwards, the masticating muscles are simultaneously affected and the jaw are clenched so strongly that it is sometimes requisite to extract a tooth in order to introduce any thing into the stomach by the mouth. This is what writers have termed locked-jaw, which is very troublesome; the tongue is frequently injured in consequence of its having been caught between the teeth. When the disease has thus far advanced the pain at the bottom of the sternum often returns and accompanying it, the spasm of the back of the neck. As the disease progresses a great number of muscles become spasmodically affected. In succession to the muscles of the neck and jaw, are those of the back, bending the body backwards, constituting what is termed Opistholonos. the abdominal muscles are violently affected with spasm during the whole of the disease, the abdomen consequently is retracted and feels hard like a board. The muscles of the superior extremities are not the only muscles affected, for those of the inferior extremities are so rigid as to render them quite stiff. At the height of the disease

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ery organ of voluntary motion seems to be affected and among the rest
he muscles of the face, the forehead is drawn up in furrows, the eyes are
ometimes distorted and immovable in their sockets, the cheeks are drawn
backwards towards the ears, so that the whole countenance expresses
he most frightful grinning. Whilst under the influence of these
niversal spasms. a violent convulsion generally comes on, and
erminates the existence. The attacks of this disease are seldom
ttended with fever which is very high, there may be some occasion-
lly [redacted] it is said by some authors that at the commencement
f this disease the pulse is full and frequent tense and strong, but,
I believe in the majority of cases there is no fever of consequence;
nd generally the pulse is weak and quick. In this disease, the head
s seldom affected with delirium or confusion of thought until the
ast stage, and it is strange that the natural functions are neither
mmediately nor considerably impaired, there is vomiting occasional-
ly in the early part of the disease. but this is not of long duration

nd it is quite common for the appetite to be good through the whole course of the disease and the food that is digested is small in quantity but that function appears to be in a healthy state, the excretions are sometimes, but not always affected, the urine is sometimes suppressed or voided with difficulty, the bowels are sometimes constipated, this, I think originates from the use of opiates, for we have no accounts of it to prove to the contrary. This disease until very lately generally proved fatal owing very much to the manner in which it was treated by the older Practitioner, Until very lately Physicians were not acquainted with a method of cure and since a remedy has been found out and employed, many cases are cured. It may be observed that the fatal tendency is not so unavoidable as has been supposed. In judging of the disease in particular cases we may observe that when it comes on rapidly it is more severe than when it comes on slowly, if not properly treated it often proves fatal before the fifth or sixth day, when a patient has passed this period he may generally be considered as safe, and in

generat the disease is considered less dangerous the longer it has continued. however the disease is sometimes dangerous for many days after the sixth.

Treatment

I am now to speak of the treatment of this disease, Experience has taught us that Opium with Calomel has often proved an effectual remedy when given in large quantities in order that we may have their full effects, which are very hard to produce in this disease. I am fully persuaded that Opium is very seldom given in sufficient doses: the practice has been to give it either in a solid or liquid form in moderate doses, every two or three hours this practice may do if its effects are not suffered to go off; however, Opium does not seem to operate in this disease as in others, for although it produces some remission of the spasms and pains, it seldom induces sleep or occasions that stupor or delirium as in other cases in which much smaller doses have been given.

It is therefore to be observed that in this affection (to use the words of Doct. Potter there must be no retailing but it must be given by wholesale) in large quantities, and as often as the symptoms of the disease may seem to require, though the first dose that is administered may have produced some remission of the symptoms yet the effects of it do not continue long in the system, and this disease being very liable to recur, it is very necessary by the time the effects of one dose are going off and (especially when there is any manifestation of a recurrence of the spasms) to repeat the dose in the same quantity as before. this practice should be strictly pursued as long as the disease shows a disposition to return. And it is not until the disease has subsided for some time and not until considerable and long continued remissions have taken place, that the doses of Opium may be diminished and the intervals of administering them be more considerable. Opium with Mercury given in this way has been successful in many cases,

and probably they would have been so in almost all if it had not been too sparingly employed, either from the timidity of the practitioner or from its exhibition being prevented by that interruption of deglutition which so often attends this disease; which circumstance requires that the medicines should be immediately and largely employed before deglutition is impeded; or if this opportunity escape you. the medicine in sufficient quantity and with due frequency must be thrown up the rectum in the form of glysters. It has been recommended to employ some of the Antispasmodicks with Opium such as. Musk, Camphor &c. This I think is a very weak practice and would answer a very little better purpose than Opium alone. What would be the effects of Emetics in this disease? We know they produce powerful effects sometimes in relaxing the muscles in spasmodic and convulsive diseases. The warm bath has been spoken of as a remedy. Purgatives have been very highly recommended by one of the continental Physicians, they might probably

* For the account of the case related of Doct. Jackson

Vide Medical Recorder for Oct.r 1826 page 315

answer. Bloodletting should not be used except in plethoric subjects. Blistering was at one time very much used, but it is asserted by some practitioners to be hurtful. Moxa has been used with decided advantage of late years, it should be applied all along the spine and the eschars dressed with Mercurial Ointment so as to keep a discharge for some time. I am inclined to believe that one half nearly of the remedies employed are useless. I think that wine, Opium, Moxa, and Mercury are the principal remedies in this disease of these remedies, Wine, Opium and Moxa retard its progress and prevent death from exhaustion, until the Mercury shall have time to eradicate the disease, by converting the tetanic affection into a Mercurial action. Without the aid of Opium, and Wine, the Mercury would not have time to act and the two former would scarcely suffise without the aid of the latter. The Mercury (as I have hitherto observed) should always have its full effects and these

effects should be kept up for some time for if they be not the Febrile affection will certainly return. The best form of using Mercury is in that of Ointment, very extensively. Tobacco has been found useful by Dr Jackson of Northumberland (Pennsylvania) in a case which occurred in his practice, produced by an injury received on the back of the hand by a piece of bone. The part had heated and he made an incision into it and applied over it a poultice made of a strong decoction of tobacco with linseed-meal, it was applied from the hand to the shoulder, and it was changed every six hours. A similar application was made to the Scrobiculis-Cordis in order to operate upon the whole system. In six hours, the symptoms had ameliorated, the application was continued with the addition of Castor Oil to open the bowels. In about Thirty six hours from the first application the tobacco produced nausea and subsequently so much vomiting that the whole complaint appeared to be subdued; the tone of the patients stomach was now restored by

nourishing food and drinks, as Cordial, Huxams Tincture &c.
About the same time Erysipelas of the arm came on, succeeded
*by Mania à Potu, which was cured by Opium, Camphor &c.

Prophylactics

The best preventative of tetanus consists in converting punctured wounds into incised ones by means of a scalpel, and the exciting of suppuration in wounds that are lacerated. The precautions should be taken immediately after the receipt of the injury and before the tetanic symptoms shall have made their appearance. If there be an objection to the dilitation of punctured wounds by a scalpel, the application of some Escharotic should be made, such as Ley, Corrosive Sublimate, Lunar Caustic &c. These should be followed by poultices so as to bring on suppuration. If the patient cannot swallow food must be then thrown into the stomach by means of a gum-elastic tube. ——

Finis

Dissertatio inauguralis

de praedispositione hereditaria

judicio

Praefecti, – Professorum,

Regentiumque,

Academiae Mariae Terrae,

pro gradu

Medicinae Doctoris,

subjecta

a Jacobo Garry.

hâc undevicesima die Mensis Martii,

1830

Fortes creantur fortibus & bonis: Ibor.

Professori, Nathan. R. Smith,

Viro

arte & facundia insigni,

summa virtute,

Conatus hic,

ut parvum, sed verum testimonium sit,

quanti habetur,

gratique animi pro beneficiis,

quorum memoria semper manebit,

quaecunque eum vocant terrae,

inscribitur

ab amico et discipulo ejus,-

Auctore-

Fortes creantur fortibus et bonis:
Est in juvenis, est in equis patrum
Virtus: nec imbellem feroces
Progenerant aquilae columbam. Hor.

Praedispositione hereditaria utimur ad denotandum organicum et ad aliquos morbos proprium corporis habitum, qui a parentibus iis morbis affectis in generatione ad progeniem suam transmittitur. Hereditarios appellamus eos morbos, qui pro causa prima statum organorum quendam, — a parentibus transmissum, — iis affectibus praedisponentem, habent —

Nota characteristica morbi hereditarii est, quod in natis eadem aetate, et medio rerum similium, in quibus parentes fuerant, magna ex parte se manifestat: sic, filius, cujus pater annos natus triginta mortuus est de phtisi, ejusdem aetatis accessu, si

Sinus occurrunt partibus ut levius:

Est in numero, est in equis partum

Virtus; nec indulsum semper

Propinquant aquilae columbam. Hor.

similiter situs, laborabit phaenomenis huius morbi praecursoriis quae, eadem lege consecuta in filio, quae in patre ad finem pervenerent -

Tamen, filius quanquam praedispositus, iis rebus omnino aut in parte absentibus, quae in patre morbi patefactionem adjuverant, morbum evadere possit. Factum hoc reddit rationem quomodo fit, ut generatio tota immunis sit morbo, qui in proximo se patefacit, cur aliquos familae et sexum unum potius quam alium aggrediatur.

Magni momenti est, discrimen exponere inter hereditarios et morbos congenitos. Accepimus eos esse congenitos, qui infanti in utero a matre communicantur. In tali casu, infans, morbo patefacto, in mundum venit. Maculae in cute huic generi referri possunt. Syphilis in quibusdam casibus morbus est congenitus. Convenit inter eosdem morbos collocare mutilationes varias, quae observantur, simulac infans "aura etherea vescitur"

cum in parte mutilata cicatrix sit manifesta.

Tunc, inter morbum congenitum et hereditarium hoc interest, quod infans nascitur cum illo et fortuitus est, sed non communicatus in coitu, nec excoriens ex organica habitudine tradita in generatione, quod unum e praecipuis notis hujus est. Tamen morbus esse semel congenitus et hereditarius potest, si, dum in utero foetus est, res habitus in coitu transmissae exortum favent.

Morbi, qui a nutrice infanti communicantur, nostra sententia, congenitis similitudinem ferent. Nutrix, etiam, in dispositionem moralem infantis potestatem magnam habet. Virgilius ad exprimendam Aenae mentem inexorabilem facit infelicem Didonem sic loqui:

Nec tibi diva parens, generis nec Dardanus auctor;
Perfide; sed duris genuit te cautibus, horrens
Caucasus, Hyrcanaeque admôrunt ubera tigres.

Aeneid, lib. 4.

Cum in hacce modulatio nostra ad numerificis.

Ubi ante nostrum conjectatione et hominum

interest, quod infinis nostrorum cum illo et petitione est, ita non cum

= numerantur in certis. Hoc necessarium ac requisitum hactenus finitis in

quantitatem, quod numero e proximitatis inter hujus est. Quamvis tum

= hic ejus usus comparatus et hominum petitat, et, cum in calculo

petitus est, ita hominis in certis numerique certitudo fecerit.

Alterum, quod a nostrice infinitis communicantur inter

hominem, comparatis simultaneum fecit. Hactenus, cum ex ratione

= illorum numerum infinitis interpretatione nostrorum hinc. Simpliciter cum

computandum. Nunc autem numerum numerationem fecit infinitum. Ubi

sic ipsum:

Nec tale nisi numeris, quorum non Numerum nostrum

Simplex: sed cum quantitate comitatus, numerus

Quantitatis, differentiaque numerum numerus tempus.

Ubi sit, ut

Non oportet morbos eos haberi hereditarios, qui proveniunt habitu debili statim manifesto post ortum, cum parentes valido corpore et bono sint. In hac re, talis habitus saepae excoritur morbis, quos gravida mater patitur, aut natura prava vel defectu alimenti, quod capit, desiderio morali,- tristi,- protracta quo laborat, luxuria et vita molli quam agit, cum vigilat nocte et in multum diem dormit, uno uerbo, cum se tractat, quasi hypocausti plantam, cui purus aer et frigidus nocet,- solis radius aegrotat. Habitus hic, tunc, hereditarius non est, sed congenitus. Ideo, illius nota prima, hujus affectionibus morbidis absit. exempli gratia: Rachitis hereditarius non habetur, cum infans ortus e parentibus provecta aetate, vel juvenili, si temperies sit infirma aut pituosa, aut labore vel morbo fractis, eo morbo laborat.

In classe hereditaria locum non damus quibusdam morbis endemicis, qui, ut, Bronchocele, causis localibus,- non vitio organico,- communicato a parentibus, manifeste producuntur. Nam, Bronchocele a causa locali corripit personas firma habitu, et quorum parentes summa

valetudine fruuntur. Infans, equidem, cujus parentes hoc morbo imbuti sunt, si nascitur et vitam agit in eo loco, quo endemicus est, ejus impetui magis obnoxius erit. Sed, credimus, quòd dispositio haec iisdem causis referri debet, quae infanti lactenti affecerunt. Confirmatur, praeterea, quia multi affectorum, patria mutata, hoc malo se eripiunt, et liberi eorum, qui malè se habent in eadem regione insalubri nascuntur et integri vivunt.

Quomodo concipi potest morborum transmissio hereditaria? Quoniam transmissio haec accidit eodem temporis puncto, quo generatio, cum actu eo obvie nectitur. Ergo, hic opus esse videatur reminisci varias hypotheses generatione conditas, ut verisimilis eligatur, causa exponendi modi, quo formatur dispositio organica causa morborum hereditariorum praedisponens, et eorum transmissionis reddendi certam rationem. Sed nocte multa et caliginosa obumbratur generationis arcanum. Quid i~~ex~~ hypothesibus delectum facere ad factum exponendum?

Cui bono? Tota vita adhuc latet, qua ratione fontem ejus explorare speremus, et varia phaenomena, quorum causa eo fonti connectitur.

Dicamusne, exempli gratia, cum inclyto Buffon Quod si particulae interiores (Moules intérieurs) sanae non sunt, organicae (Molecules organiques) ex his ortae, vitii ejusdem partem ferent, et partem eandem in foetu, quam in parente formare debent. Exemplum hoc satis monstrat quantum erroris in hoc modo investigandi est.

Ab uno disce omnes. Aeneid, lib. 2

Quoniam propositum non est meum hic tractare generationem, de ea singulatim narrare omittam. Detuli sententiam de natura morborum hereditariorum, quam confirmare conabor phaenomenis, quae constanter afferunt. Modus hic tutissima mihi videtur, quia factis experientiâ firmatis sustinetur. Quantum auxilii in potestate habebit Medicus qui sententiam hanc sequitur, sive ad morbi exortum

praevertendum, sive cum eo exorto feliciter contendere — germinis ejus perfecte delendi, id est, eum transmitti inhabilem reddere, exponetur —

Opinio ferè admissa de natura morborum, de quibus hic agitur, est, quòd ex viro quodam consistit, quod transmissum a parente, morbum similem in libero producit. Hujus mentis non sumus —

Quomodo, credendum est, quòd causa materialis, per multos annos, in corpore inclusa, sine ullo signo operis ejus dando existat. Quomodo eadem ab una generatione ad alteram transmittitur? Si, ita fuisset, phaenomena primitiva et summa corporis vivi, rejicienda sint — scilicet, nutritio et materiae excretio, quae, aliquo tempore, partem organorum constituit. Sed, si fateatur, quòd humani corporis vita non producitur, nisi re renovanda quae sustinet, non possumus admittere materiam morbidam restare intactam,

Instrumentum, sine cum in exacta delineatione

geometria quia perfecte delineat, id est, non transmutat

=ulum veritatem, adjunctur.

Quinque fere subsidia de natura instrumenti

depositum hic agitur. Est quod in ipso quadam consistit quod

transmutamus a facinoris, modum ductum in libro transmittit.

Deinde instrumentum non dimensi.

Alternatio, gradationem est quod cuique materiali

sit instrumentum, in corporis modulo, sine ulla aliqua quasi

causa existit. Alternatio causam ad unum quasi materiae quod

affectum transmittitur, id est, ita fieri, ut unum quasi

ex alterum oriatur sed generatim sint. Motus instrumentorum

et instrumentum necessitas, quasi aliquo tempore, instrumentum

constituit. Ortus, id est, quasi instrumentum

instrumentum, sed id instrumentum quasi aliquod, non instrumentum

adhibitum instrumentum modulum tantum habere.

inter ruinam et redintegrationem, quae in gremio organisationis assidue operatur. Sed, potius censendum, has causas assimilationem pati, quae actionem eorum nociam vincit, et eas constituit partes organicas, donec liberatae, rebus faventibus et quasi ad naturam propriam restitutae, eosdem organos quorum pars fuerunt, invadunt. Sed, in hac re, etiam, admittendum est, quòd hae causae, assimulatione subeunda, naturam mutant et elementa eorum delentur et renovantur, dum aliae connexiones formantur, - tempus denique advenire, cum, statu primo assumpto, causae morbidae agendi partem, aptae fiant sic, ut accurate loquamur, virus existere non possit, quoniam natura eius mutata fuisset, et elementa sola - apta ad productionem eius in corpore sint - eius escortus, cum locum habeat, effectus est dispositionis organicae - primitivae - et impulsae rebus opportunis -

Nunc, charactere vero morborum hereditariorum

definito, perpendemus, quibus morbis hic proprius est. Prima facie, videatur pertinere affectionibus cunctis, quae genus humanum excruciunt. Morbi chronici, tamen, aptiores a parentibus transmitti nobis apparent. Syphilis, Scrofula, Epilepsia, Phtisis Haemoptysis, Melancholia, Hysteria, Hypocondriasis, Podagra Apoplexia, Schirrus et Cancer; Morbi organici cordis a generatione una ad alteram transire plerumque observantur.

Accepimus dispositionem organicam ad morbum, peculiarem esse statum corporis totius, aut organorum nonnullorum, ob quem functiones ita agantur, ut morbus exoriatur, si homo in quodam ordine rerum sit. Dicere quid conditio haec sit et exhibere veram eus naturam non possumus. Sed, quod existat, interdum, quibusdam signis externis comperitur. Ita, dispositio organica ad scrofulam iis externis notis consociatur; comâ candida; facie parum inflata; cuti tenera et alba; capite magno; vi intellectus praemature

palefacta; labiis tumidis; oculis teneris; plerisque glandularum lymphaticarum plus aut minus manifestis; & causis minimis tumescere pronis.

Dispositio organica ad affectiones ardentes ex vivido colore, magna vi agendi, desideriis mobilibus, sanguine e naso crebrò fluente, cognoscitur; uno verbo, cum systema sanguineum, et praesertim capillare praepollet.

Organica dispositio nihil aliud est, quam causa prima et praedisponens -

Dispositiones organicae, - hereditariae rare existunt omni tempore vitae, et cum sint, certos limites habent. Nam experientia docet, quòd, quanquam praedispositio tempore ipso impregnationis recipiatur, vis adjuvandi in morbi productione non habet, donec organi, in quibus sita est, ad certum gradum perfectionis et roboris perveniunt - Saepe cessat in toto, simulac vires organorum diminuunt - Morbi ii, qui, certo tempore, observantur, et connexionem habent cum mutatatione, quae

Analyses, labia humidae, secretionem, determinat et fermentum [illegible]

[illegible] [illegible] [illegible] [illegible] [illegible]

[illegible] Hypostasis organica aut affectionis arcanis ex morbis

[illegible], [illegible] [illegible] [illegible], [illegible] [illegible]

[illegible], [illegible], [illegible] [illegible] [illegible] [illegible] [illegible]

[illegible] [illegible]

Organica dispositio morbi adhuc est, quam [illegible]

[illegible] [illegible] [illegible] [illegible] [illegible]

Hypostaseos organicae - [illegible] [illegible] [illegible]

[illegible] [illegible], [illegible] [illegible] [illegible] [illegible] [illegible]

[illegible] [illegible], [illegible] [illegible] [illegible] [illegible] [illegible]

[illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible]

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[illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible]

tunc in quodam ordine organorum fit, aptissimi fieri hereditarii sunt. Causa hujus rei est simplex: nam morbi, qui cum aetate personae affectae nectuntur, cum habitu ejus intimam affinitatem habent & ex interna atque innata praedispositione magis necessarie pendent. Ergo, Stahl dicit: Si parentes aliqua aetate, morbum illi aetati congruum insigniter tolleraverunt, infans quando ille aetati pariter adpropinquari ipsi contigit, affectui illi eidem familiarius atque certius expositus observatur. De haer, disp, ad var, affec-

In teneris annis, cum systemata lymphatica et nervosa praevalent et cuticula valde pervia depurationibus facilem transitum praebet, scrofula et affectiones nervosae pracipue epilepsia et febres eruptivae se patefaciunt. Aetate hoc, frequentia convulsionum debilitati musculorum & peculiari labori capitis - quasi centri motionis, debentur. Ob hanc causam, infantiae depurationes in capite magna ex parte

locum habere observantur. Post aliquot annos, vasa lymphatica et nervi praevalentiam suam amittunt. Cutis lentitiam suam conservans, plus firmitudinis acquirit et minus pervia est. Musculi magis firmiter, rapide et certe contrahunt. Pubertas advenit. Tunc, scrofula, epilepsia febres eruptivae, & depurationes evanescere videntur. Propensio, quam motiones in pueritiâ ad caput habebant, in organa respirationis, voeis, & generationis, tenditur. Systema sanguineum praedominat, affectiones ardentes & haemoragiae occurrunt. Sicut pulmones vim novam agendi obtinere videntur, haec actio frequentiâ hujus organi morborum comitatur; sic, eodem tempore, praedispositio hereditaria haemoptysis et phtisis saepae apparet.

Homines affecti iis morbis, pectus malè formatum, humeros elevatos, scapulas extantes, collum longum, maxillas rubeas, saepe habent. Phtisis liberorum, qui nascuntur

parentibus scrofulâ laborantibus, nisi post pubertatem ferè non apparet. Tunc, oritur ex suppuratione tuberculorum, quae in ultimis annis infantiae formata, cum natura speciali modo in pectus laborem suum vertit vel inter pubertatem & aetatem virilem, per quod tempus, natura in formandis respirationis organis laborat. Pubertas insigniter mutans hominis naturam physicam, etiamnum in magis conspicuo modo statum ejus moralem vertit. Natura, hactenus, visa est incrementum physicum individui ante oculos habere. Pueri intellectus in se conservando tantum versatur. Ipse totum studium. Nunc, vita altera coepit. Novus ordo functionum affert desideria nova, sententias & Ideas diversas. Tota natura ejus mutata videtur. Imaginatio catenus iners catenas ejus disrumpit, fugam capessit & suo tactu lucido cuncta exornat et magnificat. Vita socialis cum affectionibus gratis inchoat. Juvenis novis desideriis flagrat, et accensus impedimentis, quae iis gratificandis restitunt

Incantatione aeruginis laboratione, nisi quod hydrolatum quod
item adjunxit. Olim, quidem ex aluminatione laboratione
quoque in ultimis annis in Gallia fuerunt. Cum tractatione
facta in regione laborem aliquem vertit sed inter hydrolatum
calidum aerulam, per quam tunica, tractatio in fermenta ter
incantione aquam laboravit. Gallorum inventores multum
tractatum hydrosum, diminuunt in magis conjunctum modo stellam
qua incrustam vertit. - Vitrum, hodiernus, una ex necessariis
hydrosum inventum ante oculos habet. Hoc indicatio in ea
consumendo laudium verdatur. Olim tuber stannum. Hunc
vitro adhaeret capit. Nunc modo funeris non suffit determinare
novum, aestuantium vitrum aliquem. Sine tractatione quo modo
indicium. Omnipotentia determinans capitum cum determinat -
hydrum capitis. Non tantum locum Gallorum exercent et inventiones
Vitri accedit non affectionem quod medicat. Hanc non ex
Hispania, et accessum indicamentis, quae in praeliminis tractatum

vel cerebri incitatione, callem rationis relinquat et delirus fit. In aetate ea, mania hereditaria se patefacit. Eadem aetate plusquam ulla aliâ mulieres hysteriâ patiuntur. In aetate virili, Musculi vim novam acquirunt, podagra hereditaria adoritur. Podagra mulieres nisi habitu firmo raro corripit. Eunuchi, in quibus castratio debilitatem fecit, quae musculorum patefactioni obstat, huic morbo non exponuntur.

Eunuchi non laborant podagrâ neque calvi fiunt

Hipp. Aph. 28. sec 6. —

In senectute, venae magnitudine augentur; sed volumen hoc e distensione mechanica plusquam vera pate=factione provenit. Organizatio fit deterior, et plus aut minus tardè ad summam ruinam accedit; partes molles gradatim arescunt; venae debiliores pressurae a latere cedunt et distenduntur. Arteriae etiam sanguini

e corde fluenti minus obsistunt. Haec dispositio — effectus annorum specialiter notatu dignus, quoad cerebrum attinet quia in tali modo siccat, ut cavum osseum, in quo continetur, non impleat. Credo, hoc esse unum e praecipuis causis ad apoplexiam in senectute antedisponentibus. Animadverte propensionem sanguinis ad capita literis Studentium, sive Oritur e vita sedentaria, sive cerebri excitatione, quam opera intelligentiae exigunt, et rationem habebis, cur docti apoplexiae tam obnoxii sint. Praeter dispositionem hanc, altera est hereditaria, quam habitudo apoplectica notat, — Caput magnum; facies rubens; collis brevis; obesitas; pulsus fere plenus & durus; mens irae pronus. Quid de apoplexia diximus, ad paralysim applicari potest, aquâ saepe succeditur. Affectiones alterae, de quibus dictum est tempus manifestationis certum non habent. Tamen Schirrus et cancer, — cordis morbi chronici post aetatem

virilem occurrunt.

Quomodo formantur dispositiones hereditariae?

In initio homines proculdubio nati fuerunt integra valitudine et paucis morbis expositi. Sed, status civilis augendo desideria nostra & collocando nos in ordine rerum vario, qui organizationi multum afficere valet, item morbos multiplicavit. Primò, homines paucis causis expositi, quibus organizatio se finxit, tantùm affectiones acutas et diurnas tolaraverunt. Quia vita simplex et uniusmodi fuit, dispositiones ad morbum raro formatae, - et hae aevi perbrevis fuerunt. Contrà, tam multae causae in organizationem hominis civilis agunt, ut dispositiones necessariè augeantur; et quia, magna ex parte causae hae tardè & assiduè agunt, - dispositiones firmae formantur, - cum organizatione identitatem obtinent, - et transmitti aptae fiunt.

Quoniam, satisfactio morbi quocunque de genere causam

disponentem existere admittit, quae, ut diximus, nihil aliud est, nisi organica dispositio, si haec oritur e causis physicis aut moralibus, quae longo tempore vel magnitudine eorum actionis, stabilem impressionem in corpore fecerunt, sequitur quod dispositio haec partem inhaerentem personae, et transmitti apta est, ut temperies et idiosyncrasia.

Ut hae dispositiones concursu rerum certarum determinato provenire possunt, ante concursum hunc non existunt. Hoc indicat cur Phtisis fortuita sit hereditaria in puero, qui ex parente laborante morbo patefacto nascetur, vel paulisper ante patefactionem, et liberi nati ante hoc nihil ex eo timere habeant.

Quia dispositio organica certo concursu rerum formatur, concursus alter eam formatam delere potest. Igitur, morbus certo tempore vitae transmitti aptus, alio non ita est, Causa haec aliquos liberos facit haeredes

parentum morborum, dum alii immuni sunt.

Ratio praevertendi morborum hereditariorum transmissionem. Noscimus tantum modos duos morborum hereditariorum transmissionis praeveniendi. Id, quod aestimo directissimum, potentissimumque e maritali conjunctione obtinetur. Omnibus est notum, quod unio haec valde afficit statum physicum atque moralem filionum, qui ex eo oriuntur. Conditio physica et moralis hominis atque ac generis animalium domesticorum pejus aut melius reddi potest.

Oportet seligere personam, cujus organizatio est dissimilis aut opposita organizationi ejus, qui dispositione aptâ transmitti laborat. Exempli gratia: homo scrofula laborans mulieri firmo habitu et fibrâ siccâ conjungi decet. Podager ducat uxorem debilem, temperiê lymphatica. Is, in cujus familia mania est hereditaria, mulierem, cujus familia

animi tranquillitate et serenitate insignis est, jungere debet. Ratio secunda in locando homine in medio rerum quae ejus habitudini modum adhibere, et dispositionem organicam corrigere valent. Sic, in exemplum, homo scrofulâ laborans e regione frigida & humida cedat, – in coelo sicco & calido vivat, – carnem assatam et fructum dulcem capiat, – maturè ad lectum se recipiat, – multò manè surgat, – literarum studio nimium operae non det, – sub diò sine fatigatione exerceat, – in mari se proluat, – se fricet, – et vestis ejus sit levis et calida.

Modus corrigendi et abolendi dispositiones

Simulac, mulier concipit, ovum ab ovariis, ubi formatum fuit, descendit & in utero a tubis Fallopiis deponitur. Illic, incubatio fit. In organo hoc tanquam corpus alienigenum agit, membrana mucosa velans uteri partem internam inflammatur, & tumet.

Uterus augetur; vasa & membranae formantur, aut inflammatione institutâ inter duas partes vivas, vel, quod verisimilius est, patefactione partium, quae incubatio eget & quae formatae cum ovo per tempus graviditatis id comitantur.

Foetus matri conjunctus interventu corporis, et vasorum, sanguinem necessarium vitae ejus & incremento ab ea recipit. Haec connexio intima inter foetum & matrem nobis occasionem dat agendi in eum tempore, quo facilius est ei modum adhibere. Igitur, dum in utero est, modus corrigendi aut abolendi dispositionem hereditariam adhibeatur.

Quoniam, foetui ante ortum accessus directe non patet, nos oportet in matrem agere. Modo adhibendo in matris habitu, foetûs organicam dispositionem moderari possumus, -

Post partum, infanti accessus directe patet; tum, infirmitas et conditio imperfecta ejus organorum, rebus circumstantibus affici obnoxium reddunt. Infans nuper natus ceraе similis est, quam, ubi placet, duram facere possumus. Nobis tantum opus est, scire res ideoneas exhiberi, & modum exhibendi.

Si infans a matre dispositionem hereditariam recipit vel a patre, dum matris constitutio eam faveat, oportet nos nutricem habitu diverso parare & disponere res circumstantes tali modo, ut, dispositio organica & primitiva aliqua exparte mutetur.

Ratio praevenendi patefactionem dispositionis hereditariae Ut, prendere dispositionem hereditariam penes artem semper non est, quia nimis profunde radices agit, vel tempore opportuno res propriae non utuntur, restat nobis tantum praevenire morbi patefactionem, si fieri possit —

Est partium, cujusvet accessiones mirandi perfecti, sunt
et Consilio simplicitatis ipsa proportionem. Subito determinatio
officio observatione tendunt, diplomi regiae matrice Petrus et
illis est, quamvis, sub ipsorum, dicere fuerunt. Ut
tantum ipsum est, atque ex interpretes certitudo, Principum
certitudinem.

Et ipsum a matre determinatione Reconstruxerunt
Legitimi vel a Patris, cum matris constitutio eorum fuerunt
Illustrat sed Institutione Publicae ministra Patrum & Religiosorum
Sic circumstantiae tali modo, ut duplicitate propriae et
Principium adjunxerunt Particulae matutinae.

Sicut Principium Institutionum diplomatum fuerunt
Illi, Pertinere ad Institutionem Reconstructionem Principum
Ministri non est quia Minus Imperatoris Pertinere regulas
Temporum Institutione Ex Imperiis non ultimum. Sicut
Publicis Institutione Principium matris Institutionem, Principum
Publici —

Duo genera causarum ad producendum morbum necessaria sunt; unum, quod appellatur praedisponens, est organica dispositio, primitiva, aut acquisita, diuturna vel diutina; alterum, quod vocatur occasionem praebens, est res externae, quibus plus aut minus corpus afficitur. Nunc si, nihil ad abolendam causam praedisponentem factum, aut Medicus eam eradicare non potest, hujus officii est causas amovere, quae morbi patefactionem producere possint. Sic, liberi scrofulae praedispositione exposita, vivendi disciplinam antedictam observent. Ratio eadem proderit ad phtisem tubercularem praeveniendam, quae est forma frequentissima, sub qua scrofula se manifestat, Experientia praecepta haec confirmat.

Ii, qui haemoptysi hereditariae antedisponuntur coelum mitem & serenum incolant, — mature ad lectum se recipiant, — labor corporis et animi moderatus sit, —

intemperantiam & exercitationem violentam, quae circulationem accelerat & in pulmonibus sanguinis accumulationem facit,— transitiones subitas a calore ad frigus, vitare debent;— Capere alimentum mite, ut, lac, fructum dulcem, nihil bibere naturae exitantis oportet.

Epilepsia, puero dando nutricem firmitate corporis pollentem, perturbari difficilem, praevenienda est; usu frictionis & balnei frigidi, evitando res cunctas, quae terreant aut iram ejus accendere possint, Quoniam, Congestus cerebri infantum sunt causae morbi frequenter occasionem praebentes, contra eorum vim, pediluvio, & medicamentis alvum ducentibus contendere nitamur. Si, humor aliquis capite emittitur, sustineri debet. Cum nullum tale existit in hac parte, nobis apparet utile, unum excitare, aut vesicatorium parvum post aurem admovendo, vel ulcum artificiosum faciendo in colle. Medicus eruditus hoc modo sanitatem infanti dedit,

cujus parentes omnes liberos, mensibus natos tribus, de convul=
=ionibus amiserunt.

Virides alvi evacuationes saepè comitantur con=
=vulsiones; tunc, iis suum proprium colorem flavum reddere
oportet; pulvis Rhei cum oleo mistus & super ventrem frictus
Syrypus rhei simplex interne exhibitus indicationem hanc
peragunt.

Patefactio Maniae hereditariae impeditur fugiendo
Omnia, quae desideria augeant, – animi aegritudine
afficiant, – & iram moveant; vitam temperatam & ad
normam agendo, – intellectûs operi temperatè incumbendo.
Si, homo sit habitu sicco, balneus, - potus diluens, – alimen
=tum mite ad eundem finem valdè juvant, Si, temperies
sit sanguinea & sanguis fluit, non subito supprimendus.
Omnia, quibus sanguis ad caput impellitur, evitanda
sunt. Hac de causa, caput tenuiter opertum sit, –

pedes calidi, – & alvus libere ducatur, Alcohol, sicut, pestis fugiendum, navigatio utilis est. Ad haec, exercitatio in aere aperto, – balnei domestici, – & diluentia, causa avertendi Hypocondriasim & Melancholiam, utilia.

Omnia, quae circulationem accellerent, ut, exercitatio violenta, gaudium immodicum, Ira, Zelotypia a quo pulsationes duplicantur, & moestitia, ab omnibus praedispositis ad cordis morbos organicos, evitanda.

Augendo corporis robore, si, mulier sit debilis reddendo mensium excursum facilem, – retinendo eos regulares frictione membrorum inferiorum, tonica cum antispasmodicis exhibendo, omnia exitantia ad amorem ante tempus naturâ datum, vitando, Hysteriae hereditariae occurritur.

Exercitatio & sobrietas podagrae hereditariae optimae antagonistae sunt.

Simulac, morbus hereditarius se patefacit, eadem ratione medendi, quae morbus fortuitus, eget. Tamen, attento animo, respeculiares ad characterem hereditarium perpendamus. -

Hanc autem, morbus hereditarius se habet, eadem lege

hereditatis, qua morbus fortuitus, quod, etiamsi, ratione ori-

ginis, sed per reductionem ad eum ordinem hereditarium

pertinendum. -